C-HOBIC Phase 2 Evaluation

Summary of Findings

Report

January 2015
This report was prepared by Nagle & Associates Inc. on behalf of the C-HOBIC initiative and the Canadian Nurses Association.
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EXECUTIVE SUMMARY

This evaluation focused on the implementation of the Canadian Health Outcomes for Better Information and Care (C-HOBIC) data set in acute care in Manitoba and the use of the C-HOBIC Transition Synoptic/Summary Report (TSR) in designated sites in Ontario and Manitoba. In Manitoba, the collection of the C-HOBIC data set in acute care began in November 2012 within St. Boniface Hospital hence the evaluation focused on the early adopters’ initial experiences with applying, documenting and using the data set as well as the C-HOBIC-TSR. In Ontario, while a number of organizations had been using C-HOBIC since 2006, the C-HOBIC TSR was made available to clinicians in January 2014 through the ClinicalConnect™ portal in the Hamilton Niagara Haldimand Brant (HNHB) and Waterloo Wellington (WW) Local Health Integration Networks (LHINs). In these LHINs, the evaluation focused on the initial reflections of early adopters from a variety of care settings on the value of the C-HOBIC TSR in supporting patient transitions.

In Manitoba, the evaluation included a) an online survey made available to C-HOBIC users in acute care for completion in the fall of 2013, b) two focus groups with users/leaders from St. Boniface Hospital and c) a follow-up interview and review of the findings with nurse leaders from St. Boniface and the Winnipeg Regional Health Authority (WRHA). In the fall of 2014, a 1-year post-evaluation follow-up interview was conducted with two of these senior nurse leaders. In the fall of 2014, users of the ClinicalConnect™ portal within the two targeted LHINs in Ontario participated in an evaluation that included a) an online survey and b) a focus group with clinicians representing three care sectors.

The following report includes a synthesis of the findings from these data collection activities and recommendations arising from the user experiences within St. Boniface and those of the users of the ClinicalConnect™ portal in the HNHB and WW LHINs. The primary findings focused on the need to 1) adjust and enhance the education and training strategies for C-HOBIC and the C-HOBIC TSR, 2) review and redesign the current online C-HOBIC documentation tool (Manitoba), 3) identify processes to strengthen the continuity of information between acute care and other sectors (e.g., primary care, home care and long-term care), 4) increase clinician awareness of the availability of the C-HOBIC TSR and its value in supporting care planning and care transitions and 5) encourage current users of C-HOBIC and the C-HOBIC TSR to host symposia or workshops to share lessons learned and further illustrate the potential application and value of C-HOBIC for supporting transitions of care, quality improvement initiatives, care planning and utilization review. In both jurisdictions, the uptake and use of the C-HOBIC TSR was limited at the time of the evaluation activities. Both respondents and leadership indicated that this was in all likelihood due to the limited time during which the C-HOBIC TSR had been available to clinicians. With more time and exposure to the outcomes data and the synoptic
report among care settings as well as further demonstrations of their value and use to practice and care transitions, future evaluation will probably net a change in overall uptake.

Recommendations are provided relative to the specific findings and should be considered in advance of future implementations of C-HOBIC and the C-HOBIC TSR. Most important is the finding of the need to cycle back to clinicians and managers to ensure the use of the C-HOBIC data and the C-HOBIC TSR to inform and review practice outcomes and support care transitions respectively. Future efforts should focus on activities to support the full integration and optimal use of C-HOBIC outcomes and the C-HOBIC TSR by clinicians in all sectors as well as the use of aggregated C-HOBIC reports by management personnel to direct and monitor quality and safety improvement initiatives. Both jurisdictions indicated that more time, more experience and broader implementation of C-HOBIC and the C-HOBIC TSR would be necessary to fully realize the impact on care transitions.
BACKGROUND

The Canadian Health Outcomes for Better Information and Care (C-HOBIC) project has been designed to increase clinicians’ access to information that is of value to their practice and access to information across the continuum of care to support continuity of care and ultimately increase clinician adoption of evidence-based standardized outcomes information at the point of care. One approach to sharing the C-HOBIC data across the care continuum is the use of a Transition Synoptic Report (TSR). Based on the 24 data elements in the four categories of the C-HOBIC data set, the C-HOBIC TSR was designed to provide a summary of the patient’s outcome status on transition from one clinical care sector to another (e.g., between acute care, long-term care, home care and/or primary care).

<table>
<thead>
<tr>
<th>C-HOBIC Concepts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functional status and Continence</strong> (ADL and IADL)</td>
</tr>
<tr>
<td>• Bathing</td>
</tr>
<tr>
<td>• Personal hygiene</td>
</tr>
<tr>
<td>• Walking</td>
</tr>
<tr>
<td>• Toilet transfer</td>
</tr>
<tr>
<td>• Toilet use</td>
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<tr>
<td>• Bed mobility</td>
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<tr>
<td>• Dressing</td>
</tr>
<tr>
<td>• Eating</td>
</tr>
<tr>
<td>• Bladder continence</td>
</tr>
<tr>
<td><strong>Symptoms</strong></td>
</tr>
<tr>
<td>• Pain — frequency</td>
</tr>
<tr>
<td>• Pain — intensity</td>
</tr>
<tr>
<td>• Fatigue</td>
</tr>
<tr>
<td>• Dyspnea</td>
</tr>
<tr>
<td>• Nausea</td>
</tr>
<tr>
<td><strong>Safety</strong></td>
</tr>
<tr>
<td>• Falls</td>
</tr>
<tr>
<td>• Pressure ulcer</td>
</tr>
<tr>
<td><strong>Therapeutic self-care</strong></td>
</tr>
<tr>
<td>• Knowledge of current medications</td>
</tr>
<tr>
<td>• Knowledge about why you are taking current medications</td>
</tr>
<tr>
<td>• Ability to take medications as prescribed</td>
</tr>
<tr>
<td>• Recognition of changes in body (symptoms) related to health</td>
</tr>
<tr>
<td>• Carry out treatments to manage symptoms</td>
</tr>
<tr>
<td>• Ability to do everyday things like bathing, shopping</td>
</tr>
<tr>
<td>• Someone to call if help is needed</td>
</tr>
<tr>
<td>• Knowledge of whom to contact in case of a medical emergency</td>
</tr>
</tbody>
</table>
The implementation of C-HOBIC in Ontario and Manitoba has been underway in specific sectors and sites since 2006 and 2007 respectively.

This evaluation was intended to focus on an expanded implementation of C-HOBIC to an acute care site in Winnipeg and the use of the C-HOBIC TSR within targeted organizations in Manitoba and Ontario. The goals of this study were to:

1) evaluate the experience of a C-HOBIC implementation within one acute care organization and the use and utility of a C-HOBIC TSR received by affiliated home care and long-term care settings in Manitoba; and
2) evaluate the use and utility of the C-HOBIC TSR received from acute care by primary care providers, nurse practitioners, emergency department nurses, and community care access centre case managers within two Ontario Local Health Integration Networks.

In Manitoba, the evaluation took place approximately 10 months after implementation in acute care at St. Boniface Hospital and addressed the first goal. Because of implementation delays associated with the ClinicalConnect™ portal, the evaluation in Ontario did not occur until shortly after implementation in the fall of 2014 and focused specifically on the second goal.

C-HOBIC and C-HOBIC Transition Summary Report (TSR) in Manitoba

From May 2007 through to December 2009, the implementation of C-HOBIC was completed in two long-term care homes and six home care offices addressing outcomes for the residents of approximately 1,005 long-term care beds and approximately 3,300 clients receiving home care within the Winnipeg Regional Health Authority (WRHA). Clinicians are using a subset of C-HOBIC that excludes the symptoms of fatigue, nausea and dyspnea. Through the use of C-HOBIC, information is available and accessible to clinicians to use for care planning and evaluation of care outcomes. Education has been provided to clinicians and case managers on the use of standardized clinical outcomes to plan and evaluate care.

In 2012, Manitoba began implementing the clinical documentation functionality of Allscripts™ (formerly Eclipsys) Version 5.5 at St. Boniface Hospital in Winnipeg. The tool design and implementation included the C-HOBIC data set as required elements of clinical documentation. With the extension into the acute care sector, St. Boniface is making the C-HOBIC TSR available to clinicians. The C-HOBIC TSR is being printed and included as part of the discharge package. This access is intended to support patient care transitions from one sector to another, streamline the flow of patient information and make C-HOBIC information more accessible for nurses, doctors and other health-care providers to support the delivery of safe, quality care. To this end, clinicians working in the St. Boniface Hospital in the WRHA complete the C-HOBIC data
set as part of the interdisciplinary admission and discharge assessments for all medical-surgical inpatients. Furthermore, through the use of the C-HOBIC TSR, the acute care C-HOBIC discharge information is intended to be available to clinicians receiving patients into long-term care and home care settings.

In conjunction with the training and education sessions provided on the use of the online documentation system, the St. Boniface clinicians also received instruction in the use of C-HOBIC for the planning and evaluation of care. The online documentation went live on November 27, 2012, with the hospital-wide rollout completed by March 2013. The C-HOBIC TSR went live on July 11, 2013, and the evaluation reported herein was conducted between September and December 2013.

**Evaluation Focus in Manitoba**

Conducted in the fall of 2013, the evaluation at St. Boniface Hospital in Manitoba was designed to:

- understand clinicians’ perceptions of the value of C-HOBIC information in the planning and evaluation of patient care;
- understand how C-HOBIC information has been integrated into clinicians’ work;
- understand the impact of C-HOBIC assessments across sectors (i.e., from acute care to home care and long-term care) through the use of a C-HOBIC TSR; and
- identify lessons learned to inform future implementations of C-HOBIC and the C-HOBIC TSR.

The evaluation questions were guided by the Canada Health Infoway Benefits Evaluation Framework as depicted in Figure 1. Each of the framework’s high-level dimensions were addressed to varying degrees by the evaluation methods.
Overall Questions of Interest
The following questions were used to guide the overall design of an online survey and to structure the focus groups and key informant interviews.

Use and User Satisfaction
- What is the user experience in using C-HOBIC at the point of care?
- Do users derive value from C-HOBIC data in their practice?
- Are clinicians using the C-HOBIC data set to inform their practice?

Quality, Productivity, Access
- Have the processes of clinical care changed post-implementation of C-HOBIC? How so?
- Have communication processes among care providers changed with the use of the C-HOBIC TSR? If so, how?
- Has clinical documentation changed with the use of C-HOBIC? If so, how?
- Is C-HOBIC being used to inform care transitions between sectors?
- Is the C-HOBIC TSR useful? Usable?

Information, Service and System Quality
- Is the application/system used for the capture and transmission of C-HOBIC and the C-HOBIC TSR easy to use, access, stable and useful? If yes, why? If not, why not?
- What is working and what is not?
- What else would be useful — functionality (e.g., access to other information)?

Throughout each of the data gathering activities, informants were provided an opportunity to elaborate on each of these areas of focus.

C-HOBIC Transition Synoptic Report (TSR) in Ontario
Beginning in January 2014, the C-HOBIC TSR was made available to clinicians accessing the ClinicalConnect™ portal within the HNHB and WW LHINs. Users of ClinicalConnect™ include clinicians from acute care, primary care, long-term care, rapid response and home care settings. Since the implementation and associated education was a phased process, it was deemed appropriate to wait until the last quarter of 2014 to undertake any evaluation. In the interim, several steps were taken to raise awareness regarding the availability and use of the C-HOBIC TSR. Fact sheets and Q&As regarding accessing and using the C-HOBIC TSR were posted on the ClinicalConnect™ web page. In addition a video on using the C-HOBIC TSR was posted on the ClinicalConnect™ website. Notifications about the availability and links to the video and fact sheets were provided in the ClinicalConnect™ newsletter and also the Connecting South West Ontario newsletter. Meetings were held with the senior directors of the HNHB and WW
community care access centres (CCAC), as well as the leads for HealthLinks teams. The evaluation reported here was undertaken between October and December 2014.

Evaluation Focus in Ontario

The HNHB and WW LHIN evaluation was designed to:

- understand the impact of C-HOBIC assessments across sectors (i.e., from acute care to home care and long-term care) by making the C-HOBIC TSR available in the ClinicalConnect™ portal; and
- identify lessons learned to inform future implementations of the C-HOBIC TSR.

As per the Manitoba experience, the evaluation questions were guided by the Canada Health Infoway Benefits Evaluation Framework as depicted in Figure 1. However, of primary interest in this evaluation were clinician views from different sectors as to the usability and clinical value of the C-HOBIC TSR, particularly in support of care transitions.

Overall Questions of Interest

The following questions were used to guide the overall design of an online survey and to structure the focus group discussion.

**Use and User Satisfaction**
- What is the user experience in using the C-HOBIC TSR at the point of care?
- Do users derive value from C-HOBIC data and the C-HOBIC TSR in their practice?
- Are clinicians using the C-HOBIC data set and the C-HOBIC TSR to inform their practice?

**Quality, Productivity, Access**
- Have the processes of clinical care changed post-implementation of the C-HOBIC TSR? How so?
- Have communication processes among care providers changed with the use of the C-HOBIC TSR? If so, how?
- Is the C-HOBIC TSR being used to inform care transitions between sectors?
- Is the C-HOBIC TSR useful? Usable?

**Information, Service and System Quality**
- Do you have suggestions to improve the use of the C-HOBIC TSR?

While these jurisdictional evaluations had slightly different areas of emphasis, both were designed to derive further insights into the use of C-HOBIC and the C-HOBIC TSR and identify opportunities for improving elements of design, implementation and education and informing directions for ongoing communications and support for clinicians.
METHODS AND PROCEDURES

In Manitoba and Ontario, evaluation data were gathered using a combination of methods, including the following:

- **online survey** targeting direct care providers and/or users of the C-HOBIC TSR (see Appendices B and C for complete questionnaires)
- **focus groups**
- **interview with senior leaders (Manitoba)**

Descriptive statistics and qualitative analyses were applied to the data from the survey, interview and focus groups. Overall findings were derived from a convergence of all data sources in order to provide insights into the evaluation questions of interest and directions for future implementations of C-HOBIC and a C-HOBIC TSR. All data gathering activities were facilitated with the assistance of the Manager of Nursing Initiatives for the WRHA and the eHealth Office in Manitoba and the Director of Communications and Project Manager for ClinicalConnect™ in Ontario.

Survey

On the basis of the questions of interest, a short survey was designed using Survey Monkey™ and was expected to take no more than 5-10 minutes to complete. In advance of wide distribution, a draft of the survey was circulated to members of the C-HOBIC leadership team and members of the Manitoba and Ontario implementation site leadership teams for review. Each site was asked to vet the survey for readability and clarity and provided with an opportunity to add questions of specific interest. With the recommended changes incorporated, a revised survey was again circulated for a final review. Following this distribution, no additional changes were requested.

Completion of the survey was deemed to be consent for participation. In Manitoba, the acute care survey included 20 questions focused on respondents’ a) demographics, b) familiarity with, collection of and use of C-HOBIC, b) perceptions of the accessibility, ease of use, reliability and responsiveness of the clinical information system used for documentation, d) familiarity with and use of the C-HOBIC TSR, e) perceptions of the extent to which C-HOBIC and the C-HOBIC TSR have influenced practice and f) likelihood of using and recommending the use of C-HOBIC and the C-HOBIC TSR in the future. (See Appendix A for survey details.)

In Ontario, the survey included a subset of 11 questions focused on respondents’ a) demographics, b) use of ClinicalConnect™, c) familiarity with and use of the C-HOBIC TSR, d) perceptions of the extent to which the C-HOBIC TSR has influenced practice and e) likelihood of
using and recommending the use of the C-HOBIC TSR in the future. In addition, respondents interested in further discussing their experience with C-HOBIC or the C-HOBIC TSR or having their name included in a draw for an iPad were asked to provide an email address and/or contact phone number. (See Appendix B for survey details.)

All St. Boniface users of the C-HOBIC data set and the C-HOBIC TSR were invited to complete the online C-HOBIC evaluation survey. The survey was made available to potential respondents on September 30, 2013, and remained open until November 29, 2013. Due to the low response rate, the survey availability was extended by two weeks beyond the original target date for completion. Weekly reminders were posted to prospective respondents to encourage participation. Despite these efforts, at survey closure there were a total of 115 responses to the survey. Approximately 700 clinicians within St. Boniface had been trained in the completion and use of C-HOBIC in conjunction with their clinical documentation training (16.4% response rate).

Although long-term care homes known to have received patients with C-HOBIC assessments \((n = 16)\) were also invited to participate in a modified version of the survey (e.g., only the questions focused on the C-HOBIC TSR), only four responses were obtained. These four responses are not reported in detail in this report as only two individuals indicated their familiarity with the C-HOBIC TSR and only one respondent offered a perspective on its utility and value.

In the HNHB and WW LHINs, 579 multi-sector users of ClinicalConnect\(^{TM}\) were invited to participate in the online survey between October 27, 2014, and November 25, 2014. Again reminders were sent out to encourage potential respondents to participate in the survey. There were a total of 183 responses to the survey (31.6%). Reminders to participate were emailed to non-respondents twice during the survey period.

**Focus Groups**

Two focus groups were conducted at St. Boniface Hospital on December 11, 2013. Each focus group was led by the evaluator and held locally in a meeting room at the hospital. Participants were recruited with the assistance of an individual within the organization; all clinicians and particularly survey respondents who had indicated their willingness to discuss their experience further were invited to attend. Flyers were distributed three weeks in advance of the focus groups and light snacks and beverages provided. The final two groups included a total of nine individuals including three nurse managers, four educators, one staff nurse and one informatics nurse. The clinically based participants represented cardiac surgery, medicine, and cardiac intensive care areas.

One focus group was conducted with the HNHB and WW LHINs on December 8, 2014. Participants were recruited using the survey. Requests for additional participants were
submitted to the CCACs. A light lunch and beverages were provided during this session as well. Five individuals indicated their willingness to participate; however, only three were available on the day of the focus group due to scheduling issues. These individuals included an acute care clinical nurse specialist in orthopedics, a nurse practitioner from the Rapid Response Transitional Team, HNHB, and a care coordinator from the WW CCAC.

At the outset of each focus group, the participants were provided with a brief description of the C-HOBIC background and current state, the rationale for the evaluation, and the specific purpose of the focus group. The focus group discussions were guided by questions to elicit the users’ experiences with completing and using the C-HOBIC data and use of the C-HOBIC TSR. To a large extent, the discussions were directed to better understand the perspectives reflected in the survey. The evaluator documented key comments, questions and suggestions for future consideration. An additional person attended each of the focus groups to also document comments and ensure that all views of the participants were captured.

**Interviews with Senior Leaders**

In Manitoba, the evaluator also interviewed four senior nursing leaders. Two nurse executives, one nurse manager and one nurse educator participated in a 90-minute in-person session. Before the results of the other data gathering activities were shared, the leaders were asked to provide their perspectives on the C-HOBIC and C-HOBIC TSR experience to date. During this session the evaluator was also provided with a demo of the online documentation system currently in use. In December 2014, a follow-up interview was conducted with two of these leaders to review progress and specific activities underway to address the recommendations of the previous year.
FINDINGS

Manitoba Survey Results

Respondents

A majority of the St. Boniface respondents were female (88.7%) and registered nurses (82.6%) and 67.5% reported having more than five years of clinical experience while 36.8% reported having more than 21 years. The non-registered nurses included a small number of licensed practical nurses, occupational therapists, a clinical coordinator and an array of administrators and educators \((n = 20)\). With few exceptions, most respondents reported their primary work setting to be acute care \((n = 92)\); those choosing other settings identified specialty medical-surgical units including critical care, rehabilitation and palliative care.

Familiarity with C-HOBIC and the C-HOBIC TSR

Eighty-five per cent of respondents indicated that they were familiar with the C-HOBIC outcomes and only 12.5% indicated that they had not had an opportunity to review patients’ C-HOBIC outcomes in at least one setting. A majority of respondents (75%) had reviewed C-HOBIC within an acute care setting; other settings included long-term care \((n = 2)\), home care \((n = 2)\), palliative care \((n = 4)\), rehab \((n = 1)\) and an assortment of medical surgical specialty areas \((n = 11)\). Only 28.6% \((n = 28)\) of respondents were familiar with the C-HOBIC TSR, but few \((n = 16)\) had actually reviewed it.

The extent of respondents’ familiarity with the C-HOBIC data set and the C-HOBIC TSR further impacted the overall response to each of the subsequent questions. Specifically, for the data tables that follow the response set is generally much lower than the overall survey response rate.

Clinical Information System

Experience suggests that users’ impressions of a specific function or application may be influenced by the overall performance of an organization’s computing devices and/or clinical information system (CIS). In order to determine whether the information system performance was an issue for the respondents in this review, they were asked to rate the system accessibility, reliability, ease of use and responsiveness. Overall, each of these performance
metrics was rated positively by the respondents. In particular, system access does not appear to be a problem in this organization; more than 90% agreed or strongly agreed that accessing the CIS was not an issue. Further, the CIS reliability (70.6%), ease of use (63%) and responsiveness (55%) appeared to be deemed acceptable for a majority.

Collection and Use of C-HOBIC

Respondents were asked to indicate their level of agreement with statements regarding the collection and use of C-HOBIC and the extent to which it has influenced their practice (1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree, 5 = don’t know).

The C-HOBIC data set were rated as easy to use by 68% of the respondents ($n = 75$). More than 54% (agreed or strongly agreed) indicated that the data set was relevant to the care of their patients. Respondents identifying their primary work area as a critical care unit ($n = 12$) offered additional comments that C-HOBIC had limited relevance to their patients because they are typically highly dependent during their intensive care stay. However, comments also supported the use of C-HOBIC preoperatively and following a stay in the intensive care unit. More than 50% agreed that C-HOBIC informed their clinical practice and supported clinical decision-making but only 48% indicated agreement that C-HOBIC provided valuable insights to support care transitions.

Other comments reflected a sentiment that there were too many questions and that the information was redundant relative to other tools currently in use. Several respondents indicated that the timing of C-HOBIC completion, particularly for surgical patients (completed at the time of post-op inpatient admission) did not always make sense and that comparative data (admission and discharge assessments) were not really meaningful in their context. Others did not view C-HOBIC as particularly relevant for their care planning but suggested that it might have value for a receiving facility or home care providers. These views were further explored and elucidated in the subsequent focus group discussions. See Table 1 for additional response details.

“Not for the ICU, but can see how it would be helpful as the patient improves post-ICU”...“may be an indicator of the patient not being discharged in a timely manner”
### Table 1. Collection and use of C-HOBIC in Manitoba

<table>
<thead>
<tr>
<th>The C-HOBIC data set:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is easy to use.</td>
<td>8.0% (6)</td>
<td>21.3% (16)</td>
<td>57.3% (43)</td>
<td>10.7% (8)</td>
<td>2.7% (2)</td>
<td>77</td>
</tr>
<tr>
<td>Is relevant to the care of my patients.</td>
<td>18.7% (14)</td>
<td>24.0% (18)</td>
<td>45.3% (34)</td>
<td>9.3% (7)</td>
<td>2.7% (2)</td>
<td>75</td>
</tr>
<tr>
<td>Informs my clinical practice</td>
<td>18.7% (14)</td>
<td>25.3% (19)</td>
<td>45.3% (34)</td>
<td>5.3% (4)</td>
<td>5.3% (4)</td>
<td>75</td>
</tr>
<tr>
<td>Supports clinical decision-making.</td>
<td>18.7% (14)</td>
<td>26.7% (20)</td>
<td>42.7% (32)</td>
<td>6.7% (5)</td>
<td>5.3% (4)</td>
<td>75</td>
</tr>
<tr>
<td>Provides valuable insights to support patient care transitions.</td>
<td>17.3% (13)</td>
<td>24.0% (18)</td>
<td>38.7% (29)</td>
<td>9.3% (7)</td>
<td>10.7% (8)</td>
<td>75</td>
</tr>
</tbody>
</table>

Responses related to the use of C-HOBIC indicated that respondents did not strongly believe that C-HOBIC improved the consistency of documentation, added value to the assessment of patients, was easily integrated into practice or had a positive influence on practice. More than 75% indicated that they perceived additional workload was imposed with the work effort required to capture the C-HOBIC data. A number of respondents indicated that they were unaware of the impact of C-HOBIC on care planning, coordination and the provision of appropriate interventions or support for patient/family participation; a majority did not perceive these as benefits being realized at this time. These findings were further illuminated by the perspectives and experiences shared in the focus group discussions. See Tables 2 and 3 for additional survey response details.

### Table 2. Perceived impact of C-HOBIC on practice in Manitoba - Added Value

<table>
<thead>
<tr>
<th>Using the C-HOBIC dataset has:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the consistency of clinical documentation.</td>
<td>19.2% (14)</td>
<td>32.9% (24)</td>
<td>35.6% (26)</td>
<td>5.5% (4)</td>
<td>6.8% (5)</td>
<td>73</td>
</tr>
<tr>
<td>Added value to the assessment of my patients.</td>
<td>16.4% (12)</td>
<td>38.4% (28)</td>
<td>32.9% (24)</td>
<td>6.8% (5)</td>
<td>5.5% (4)</td>
<td>73</td>
</tr>
<tr>
<td>Been easy for me to integrate into my practice.</td>
<td>17.8% (13)</td>
<td>42.5% (31)</td>
<td>26.0% (19)</td>
<td>9.6% (7)</td>
<td>4.1% (3)</td>
<td>73</td>
</tr>
<tr>
<td>Positively influenced patient care decisions.</td>
<td>17.8% (13)</td>
<td>34.2% (25)</td>
<td>30.1% (22)</td>
<td>5.5% (4)</td>
<td>12.3% (9)</td>
<td>73</td>
</tr>
<tr>
<td>Increased my workload.</td>
<td>1.4% (1)</td>
<td>12.3% (9)</td>
<td>26.0% (19)</td>
<td>52.1% (38)</td>
<td>8.2% (6)</td>
<td>73</td>
</tr>
</tbody>
</table>
Table 3. Perceived impact of C-HOBIC on Practice in Manitoba - Care Planning

<table>
<thead>
<tr>
<th>Access to the C-HOBIC data set has:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved patient care planning.</td>
<td>18.1% (13)</td>
<td>30.6% (22)</td>
<td>33.3% (24)</td>
<td>5.6% (4)</td>
<td>12.5% (9)</td>
<td>72</td>
</tr>
<tr>
<td>Improved patient care coordination.</td>
<td>18.1% (13)</td>
<td>34.7% (25)</td>
<td>27.8% (20)</td>
<td>4.2% (3)</td>
<td>15.3% (11)</td>
<td>72</td>
</tr>
<tr>
<td>Improved the provision of appropriate interventions.</td>
<td>19.4% (14)</td>
<td>30.6% (22)</td>
<td>33.3% (24)</td>
<td>4.2% (3)</td>
<td>12.5% (9)</td>
<td>72</td>
</tr>
<tr>
<td>Supported patient/family participation in care planning.</td>
<td>19.4% (14)</td>
<td>33.3% (24)</td>
<td>27.8% (20)</td>
<td>5.6% (4)</td>
<td>13.9% (10)</td>
<td>72</td>
</tr>
</tbody>
</table>

Although 55.6% indicated that they would probably continue to access the C-HOBIC information for their patients, comments reflected that their intention was largely being driven by the requirement to do so. Nonetheless a few comments suggested that with simplification of required documentation and more consistency and emphasis on the value of its use, it could support decision-making, planning and identification of appropriate interventions.

In response to the query as to whether they would recommend the use of C-HOBIC to others, only 53 respondents answered the question. While there was some support for recommending its use to colleagues ($n = 25$), in other clinical settings ($n = 24$) and other provinces ($n = 13$), support for use with patients and families was the strongest ($n = 29$).

Use of the Transition Summary/Synoptic Report

At the outset of the implementation, the Manitoba team opted to change the name of the C-HOBIC TSR to “summary” rather than synoptic report. This name change was deemed to be a more user friendly term. Additionally, because of technical difficulties in generating the graphic C-HOBIC TSR (see Appendix C) within the Allscripts system, St. Boniface formatted an alternate format synoptic report reflecting the normalized C-HOBIC data set (see Appendix D).
As previously indicated, while 28.6% \( (n = 28) \) of respondents were familiar with the C-HOBIC TSR in concept, only 16 respondents indicated that they had reviewed a patient’s C-HOBIC data set using the C-HOBIC TSR. A majority of those who had reviewed a patient’s C-HOBIC TSR agreed that it was easy to use \( (n = 9) \) and interpret \( (n = 10) \). In addition, there was agreement that it was a useful snapshot \( (n = 9) \) and visual \( (n = 10) \) of a patient’s status (see Table 4 for additional response details). Given the low response rate to these questions, the data should be interpreted with caution but do offer a directional indication of support for the usability of the C-HOBIC TSR. Until the processes and accountabilities for use of the C-HOBIC TSR are clearly delineated, an appreciation of the value of the C-HOBIC TSR in supporting patient care transitions is likely to be limited.

Table 4. C-HOBIC TSR perceived usability in Manitoba

<table>
<thead>
<tr>
<th>The C-HOBIC TSR is:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use.</td>
<td>6.3% (1)</td>
<td>37.5% (6)</td>
<td>50.0% (8)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>Easy to interpret.</td>
<td>6.3% (1)</td>
<td>31.3% (5)</td>
<td>56.3% (9)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>A useful snapshot of patient status.</td>
<td>12.5% (2)</td>
<td>31.3% (5)</td>
<td>37.5% (6)</td>
<td>18.8% (3)</td>
<td>16</td>
</tr>
<tr>
<td>Valuable in supporting patient care transitions.</td>
<td>12.5% (2)</td>
<td>43.8% (7)</td>
<td>31.3% (5)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>A good visual.</td>
<td>12.5% (2)</td>
<td>25.0% (4)</td>
<td>50.0% (8)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
</tbody>
</table>

“...provides a quick overview of the patient’s status but has not been built into the processes for planning patient discharge to Long Term Care Facilities and the use of Home Care Services”

Tables 5, 6 and 7 depict the response distribution for the questions regarding the impact of the C-HOBIC TSR on practice including the timeliness and quality of communication within the interprofessional team. These data are provided for information only as no definitive conclusions can be drawn from such a small number of respondents.
### Table 5. Perceived impact of the C-HOBIC TSR on practice in Manitoba - Continuity of Care

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the continuity of care between care settings.</td>
<td>12.5% (2)</td>
<td>31.3% (5)</td>
<td>31.3% (5)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>Improved the timeliness of communication to providers between care settings.</td>
<td>12.5% (2)</td>
<td>50.0% (8)</td>
<td>18.8% (3)</td>
<td>12.5% (2)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>Influenced patient care planning.</td>
<td>12.5% (2)</td>
<td>37.5% (6)</td>
<td>18.8% (3)</td>
<td>12.5% (2)</td>
<td>18.8% (3)</td>
<td>16</td>
</tr>
<tr>
<td>Influenced patient care decisions.</td>
<td>12.5% (2)</td>
<td>31.3% (5)</td>
<td>6.3% (1)</td>
<td>25.0% (4)</td>
<td>25.0% (4)</td>
<td>16</td>
</tr>
<tr>
<td>Influenced the provision of support to patients and families.</td>
<td>18.8% (3)</td>
<td>37.5% (6)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>18.8% (3)</td>
<td>16</td>
</tr>
</tbody>
</table>

### Table 6. Perceived impact of the C-HOBIC TSR on practice in Manitoba - Timeliness of Communication

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has improved the TIMELINESS of communication among members of the interprofessional team in relation to patients':</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>12.5% (2)</td>
<td>43.8% (7)</td>
<td>18.8% (3)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>Symptom management</td>
<td>12.5% (2)</td>
<td>43.8% (7)</td>
<td>31.3% (5)</td>
<td>6.3% (1)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td>12.5% (2)</td>
<td>50.0% (8)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>Risk for falls</td>
<td>12.5% (2)</td>
<td>43.8% (7)</td>
<td>18.8% (3)</td>
<td>18.8% (3)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td>12.5% (2)</td>
<td>37.5% (6)</td>
<td>25.0% (4)</td>
<td>18.8% (3)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
</tbody>
</table>
Table 7. Perceived Impact of the C-HOBIC TSR on practice in Manitoba - Quality of Communication

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has improved the QUALITY of communication among members of the interprofessional team in relation to patients’</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>12.5% (2)</td>
<td>37.5% (6)</td>
<td>25.0% (4)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>Symptom management</td>
<td>12.5% (2)</td>
<td>56.3% (9)</td>
<td>6.3% (1)</td>
<td>12.5% (2)</td>
<td>12.5% (2)</td>
<td>16</td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td>12.5% (2)</td>
<td>50.0% (8)</td>
<td>6.3% (1)</td>
<td>12.5% (2)</td>
<td>18.8% (3)</td>
<td>16</td>
</tr>
<tr>
<td>Risk for falls</td>
<td>12.5% (2)</td>
<td>50.0% (8)</td>
<td>18.8% (3)</td>
<td>12.5% (2)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td>12.5% (2)</td>
<td>50.0% (8)</td>
<td>18.8% (3)</td>
<td>12.5% (2)</td>
<td>6.3% (1)</td>
<td>16</td>
</tr>
</tbody>
</table>

Notwithstanding the limited response set for these questions, the narrative comments offered in the survey suggest that if the redundancy with other documentation was eliminated and if consistent processes for use were in place, there may indeed be a lot of value to be derived from the use of C-HOBIC and the C-HOBIC TSR.

Furthermore, given that a majority of respondents were not familiar with the C-HOBIC TSR, the evaluation of same was probably undertaken too soon to derive meaningful results.

Focus Groups in Manitoba

The purpose of the focus groups (Group 1, n = 5, Group 2, n = 4) was to derive further insights into user experiences with C-HOBIC and the C-HOBIC TSR. At the outset of each focus group, participants were given an opportunity to express their views and observations on the use and value of these tools. Additionally, comments received in the online survey were pursued to elicit a better understanding of the issues raised. Overall there was substantive consistency in the messages received from the participants with an undertone of frustration related to their experiences to date. Their frustration was largely expressed in relation to the following areas:

- Current documentation application design necessitates duplicative documentation creating additional workload
- Organizational requirement for concurrent use of other risk and quality tools in conjunction with C-HOBIC also creates duplicative work effort

“There is a need to explore how the information gathered could be used by the health care team during the patient’s stay and in the discharge planning”
• Questionable applicability and timing of assessments for specific patient populations (e.g., surgical, critical care)
• Need for clear accountability and consistency of processes of documentation completion, timing and expectations of C-HOBIC and C-HOBIC TSR use
• Need to revisit long-term care and home care use of C-HOBIC and opportunities for use of C-HOBIC TSR
• Need for additional education and training on C-HOBIC

Application Design

The C-HOBIC data set was integrated into the clinical documentation application by the informatics team. There seemed to be some confusion as to the best design approach for the inclusion of the C-HOBIC suite. The initial design had the data set as embedded elements of documentation in the relevant content areas, but for reasons unknown, the C-HOBIC data set was extracted and highlighted as the elements of the “C-HOBIC initiative.” This design decision resulted in a fragmented approach to documentation and a perception of duplicate documentation since some related assessments (e.g., pain and skin breakdown and falls risk) are accessed in separate sections of the record. Consequently clinicians perceive C-HOBIC as added workload without wholly understanding the purpose of these measures relative to others.

Other Assessment Tools

Further compounding the perceptions of duplicative workload is an ongoing requirement for clinicians to complete another regionally adopted assessment. The Utilization Management tool is used to identify factors impeding patients’ readiness for discharge. While not the same as the Therapeutic Self-Care (TSC), there is a legitimate view that elements of required documentation are indeed redundant. Given the requirement to complete all of these assessments, it is not surprising that users have had some negative reactions to the addition of the C-HOBIC data set.

Limited Use of the C-HOBIC TSR

The participants highlighted a general lack of understanding as to when and by whom the C-HOBIC TSR should be generated. They indicated that the ward clerk is usually the one who prints the C-HOBIC TSR and that this usually occurs after discharge hence it is rarely reviewed by clinicians. There was also uncertainty as to whether the hospital-based home care coordinators were familiar with the report.

Although they could see value for some patients, particularly those transitioning to long-term care or home care, there was a lack of clarity regarding the processes for the actual use of the
C-HOBIC TSR. Participants questioned the value of the C-HOBIC TSR when an admission or discharge assessment was missing.

**Applicability of C-HOBIC**

Participants questioned the applicability of C-HOBIC to many of their clients. It was interesting to discover that clinicians in critical care settings were being asked to apply C-HOBIC to their patients yet this was never an intended target population. Others questioned the utility of C-HOBIC for many surgical patients, particularly short-stay patients who were not deemed to warrant the additional assessments and documentation. Participants expressed a sentiment that the completion of same would be a waste of time in many instances if not inapt. This view was contextualized as largely related to the nature of the surgical patient where changes in function (usually negative) and the manifestation of heightened symptoms are expected. Others questioned the value of completing the TSC on admission but did see value in its use at the time of discharge as a prompt to address certain issues.

**Consistent Use of C-HOBIC**

C-HOBIC is not commonly used in discussions with clients and families and clinicians indicated that they often do not have time to review previous assessments in their daily practice. The point was raised that the clinicians might benefit from a refresher post go-live, particularly to provide a reminder of the need to reassess long-term clients. Clinicians also indicated that in many instances either the admission or discharge assessments are not completed (estimated to be about 40% of the time). A question was raised as to whether the timing of assessments could be reconsidered (e.g., more frequently for long-stay patients and discharge assessment sooner than the day of discharge). Timing related to the completion of the admission C-HOBIC was deemed particularly problematic for the surgical population as it may occur in the pre-admission clinic or postoperatively upon admission to a surgical unit.

The issue of not consistently having both an admission and discharge C-HOBIC assessment was raised as being potentially problematic as the organization would not have a comparative assessment for the purposes of quality and practice reviews and also render the C-HOBIC TSR of limited utility.

“This process needs to continue to be worked on with the other facilities and departments to see how the outcome information could be best utilized to support care.”
Long-term Care and Home Care use of C-HOBIC and the C-HOBIC TSR

There was a strong sentiment expressed by some of the focus group participants that there was in all likelihood great value in using the C-HOBIC TSR to inform patient care transitions. However, it is presently neither well understood nor is it clear as to who should be generating the report or to whom it should be provided. There appears to be a lack of clear responsibility for the processes of generating and distributing the C-HOBIC TSR. Although several long-term care facilities and some home care coordinators had been provided with a copy of C-HOBIC TSR, there seems to be limited awareness of it and C-HOBIC in general. This finding suggests there is a need to revisit C-HOBIC with the other sectors.

Education and Training

In general, participants expressed concern that the C-HOBIC education and training was an added component to the sessions provided on the use of the new clinical documentation system. Education about C-HOBIC and training on the use of online documentation should be addressed separately in order to ensure that clinicians appreciate the rationale for completing the C-HOBIC outcomes. Participants felt that the training sessions provided too much information at one time. Generally, participants also felt that cycling back to users regarding the intent of C-HOBIC post go-live would be helpful to identify and resolve issues causing ongoing frustration.

Senior Leaders Interview — Manitoba

In this session, leaders were given an opportunity to offer their perspectives on the C-HOBIC experience and suggestions for moving forward. Further to this discussion, they were provided with feedback about the findings from the survey and focus groups. The leaders were not surprised by the findings and acknowledged that in moving forward some concrete operational changes needed to be pursued.

There was general agreement of the need to:

a) Revisit the purpose of C-HOBIC with all nurse users;
b) Review the current design of C-HOBIC within the St. Boniface electronic patient record;
c) Review opportunities to streamline documentation tools and reduce duplication of assessments;
d) Review the applicability of the C-HOBIC data set to specific clinical populations (e.g., critical care, select surgical populations);
e) Connect with relevant home care and long-term providers to review the use of C-HOBIC and the C-HOBIC TSR;
f) Identify consistent processes for sharing and using C-HOBIC information;
g) Identify opportunities and strategies to further derive and demonstrate the value of C-HOBIC to staff and middle management.

Overall, the leaders continue to support the C-HOBIC initiative, the long-term goals of clinical data standardization and the use of standardized information to inform clinical practice quality improvements. The interview concluded with a commitment to provide the leaders with a copy of this report and engage in further dialogue to support their next steps as necessary.

**Follow-up with Senior Leaders December 2014**

In December 2014, one year later, a follow-up interview was conducted with the Executive Director Clinical Programs & Chief Nursing Officer (St. Boniface Hospital) and Vice-President and Chief Nursing Officer (Winnipeg Regional Health Authority) and they were provided with an opportunity to give an update on the activities related to C-HOBIC and the C-HOBIC TSR. Specifically, they were asked about progress on the following points:

- **Education and training** — C-HOBIC is now core to the orientation program for all new hires at St. Boniface and addressed in a focused slide presentation. C-HOBIC is further highlighted during the provision of electronic health record (EHR) training; nurses are required to complete an exercise that requires the completion of a C-HOBIC assessment. While other acute care facilities are not yet using C-HOBIC, it is addressed in the orientation of new hires in eight long-term care homes where it is taught as a subset of the RAI. In addition, these homes are using the C-HOBIC data for quarterly reporting.

- **Use of C-HOBIC data to inform and review practice outcomes** — The St. Boniface Clinical Nurse Specialist group has been provided with research papers focused on the use of C-HOBIC data to highlight applications and opportunities. This group will be meeting to discuss how to influence behaviours and practice using the C-HOBIC data and will also look at the C-HOBIC data relative to other metrics such as ALC (Alternate Level of Care) and length of stay. The Utilization Management tool that is currently used in the WRHA is very medically focused and the team is examining the inclusion of the C-HOBIC measures within this tool to better assess acute care readiness for discharge as they recognize the value of the C-HOBIC measures, specifically the therapeutic self-care questions.

It was also suggested that the Ontario standardized, unit-based reports may provide some ideas for St. Boniface to adopt similar reports for their managers. In addition, there may be benefit in considering dialogue on use and application with Ontario counterparts.
• **Documentation of C-HOBIC** — The C-HOBIC measures are currently embedded in the admission and discharge templates. Changes to the EHR documentation tools will take time and in retrospect the tools would have been designed differently from the outset. The current design is the result of a misunderstanding of expectations regarding the visibility of the C-HOBIC measures. The intent will be to modify the design as the change queue for EHR modification allows, thereby addressing the issue of perceived duplication of documentation and effort. Clinical audits are being conducted to monitor the completion of C-HOBIC; figures reported regarding compliance are quite promising (e.g., Surgery, admission 55-60%, discharge 70-75%, and Medicine, admission 90%, discharge 70%).

• **Linkages with home care and long-term care** — Home care in the WRHA is currently undergoing some significant changes hence making their participation in the C-HOBIC initiative difficult at this time. However, the St. Boniface staff have been directed to complete the C-HOBIC TSR, print a copy and send it along with patients going to home care and long-term care. So while it is being made available to home care and long-term providers, it is unknown whether it is being used at this time.

In general, efforts continue to address the issues identified in the fall of 2014. As the leaders commented, “this is a journey”; the desired changes will take time.

**Ontario Survey Results**

In Ontario, not all survey respondents answered all questions; it appears that six did not complete the survey in its entirety. Since only 23 responded to the C-HOBIC TSR impact questions, these data are presented for information only, but nevertheless as was the case in Manitoba, they do suggest promising directions.

**Respondents**

A majority of the HNHB and WW LHIN respondents were female (90.7%), with case managers \((n = 49, 26.8\%)\), clinical care coordinators \((n = 10, 5.5\%)\) registered nurses \((n = 29, 15.9\%)\) and family physicians \((n = 14, 7.7\%)\) making up the majority. The remaining respondents represented more than 15 other clinical and administrative roles. A majority (54%) indicated having more than 21 years of clinical experience and only 13.5% reported five years or less. Most respondents were employed in a CCAC (30.3%), acute care (13.5%), primary care (12.9%) or ambulatory care (11.2%) setting. Others identified more than 10 different clinical settings as their place of primary employment.
Use of ClinicalConnect™

Given that the C-HOBIC TSR was made available to the respondents via the ClinicalConnect™ portal, respondents were asked to identify how often they accessed clinical data using this tool. Of 177 responses, only one person indicated that they never used ClinicalConnect™ while a majority (60.5%) reported using it more than once a week. In the respondent comments section, 38 individuals indicated that they used it at least daily if not several times a day.

Familiarity with the C-HOBIC TSR

Although 13.6% (n = 24) of respondents indicated that they were familiar with the C-HOBIC TSR, only 23 responded to the usability and impact questions.

Usability of the C-HOBIC TSR

A majority of those familiar with the C-HOBIC TSR agreed that it was easy to interpret (n = 18) and a good visual (n = 20). In addition, there was agreement that it was a useful snapshot of patient status at discharge (n = 19) and valuable in supporting patient care transitions (n = 19) (see Table 8 for additional response details). Given the low response rate to these questions, the data should be interpreted with caution but responses do offer a directional indication of support for the usability of the C-HOBIC TSR.

In addition to the above, five respondents offered the following comments related to this question:

“Need training for use/interpretation; having a transcription available with it”
“Need for education for all ClinicalConnect™ users”
“Build capacity of those receiving the information for consistent messaging”
“I had not received any education about this so I don’t know if it is useful or not”

Table 8. C-HOBIC TSR perceived usability in Ontario

<table>
<thead>
<tr>
<th>The C-HOBIC TSR is:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to interpret.</td>
<td>8.7% (2)</td>
<td>13.0% (3)</td>
<td>65.2% (15)</td>
<td>13.0% (3)</td>
<td>23</td>
</tr>
<tr>
<td>A useful snapshot of patient status.</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>69.6% (16)</td>
<td>13.0% (3)</td>
<td>23</td>
</tr>
<tr>
<td>Valuable in supporting patient care</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>69.6% (16)</td>
<td>13.0% (3)</td>
<td>23</td>
</tr>
<tr>
<td>transitions.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A good visual.</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>73.9% (17)</td>
<td>13.0% (3)</td>
<td>23</td>
</tr>
</tbody>
</table>
Tables 9, 10 and 11 depict the response distribution for the questions regarding the impact of the TSR on practice including the timeliness and quality of communication within the interprofessional team. Again, these data are provided for information only as no definitive conclusions can be drawn from such a small number of respondents.

Table 9. Perceived impact of the C-HOBIC TSR on practice in Ontario - Continuity of Care

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the continuity of care between care settings.</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>47.8% (11)</td>
<td>0% (0)</td>
<td>34.8% (8)</td>
<td>23</td>
</tr>
<tr>
<td>Improved the timeliness of communication to providers in post-discharge care settings.</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>39.1% (9)</td>
<td>0% (0)</td>
<td>43.5% (10)</td>
<td>23</td>
</tr>
<tr>
<td>Influenced patient care planning.</td>
<td>0% (0)</td>
<td>4.4% (1)</td>
<td>60.9% (14)</td>
<td>0% (0)</td>
<td>34.8% (8)</td>
<td>23</td>
</tr>
<tr>
<td>Influenced patient care decisions.</td>
<td>0% (0)</td>
<td>8.7% (2)</td>
<td>52.2% (12)</td>
<td>0% (0)</td>
<td>39.1% (9)</td>
<td>23</td>
</tr>
<tr>
<td>Influenced the provision of support to patients and families.</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>39.1% (9)</td>
<td>0% (0)</td>
<td>47.8% (11)</td>
<td>23</td>
</tr>
</tbody>
</table>

Although many of the respondents indicated that they didn’t know what the impact of the C-HOBIC TSR has been to date, a majority agreed that it improved the continuity of care between care settings and also influenced care planning and care decisions. Respondents offered these additional comments:

“Information not shared with service providers in the patient’s home”
“Seamless system not well established in our unit at this point”
“Again, don’t know enough about the report to be able to answer the question properly”

As per the previous question, while many indicated that they did not know the impact of the C-HOBIC TSR on the timeliness and quality of communication among members of the interprofessional team regarding the C-HOBIC outcomes, there was an indication of support that this may well be the case (see Tables 10 and 11).
Table 10. Perceived Impact of the C-HOBIC TSR on practice in Ontario - Timeliness of Communication

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has improved the TIMELINESS of communication among members of the interprofessional team in relation to patients’:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>39.1% (9)</td>
<td>4.4% (1)</td>
<td>43.5% (10)</td>
<td>23</td>
</tr>
<tr>
<td>Symptom management</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>47.8% (11)</td>
<td>0% (0)</td>
<td>39% (9)</td>
<td>23</td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>34.9% (8)</td>
<td>0% (0)</td>
<td>52.2% (12)</td>
<td>23</td>
</tr>
<tr>
<td>Risk for falls</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>30.4% (7)</td>
<td>4.4% (1)</td>
<td>47.8% (11)</td>
<td>23</td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td>0% (0)</td>
<td>17.4% (4)</td>
<td>26.1% (6)</td>
<td>4.4% (1)</td>
<td>52.2% (12)</td>
<td>23</td>
</tr>
</tbody>
</table>

Comments offered in response to this question included the following:
“Case managers not usually alerted to review the C-HOBIC”
“Need to work with it longer to better evaluate”
“Useful during hospital stay however not being used for case reviews post-discharge”
“My experience has been that neither the care co-ordinators nor the visiting nurse caring for these people at home have any knowledge of this report. Half the time the primary care office doesn’t even see it”

Table 11. Perceived Impact of the C-HOBIC TSR on practice in Ontario - Quality of Communication

<table>
<thead>
<tr>
<th>Use of the C-HOBIC TSR has improved the QUALITY of communication among members of the interprofessional team in relation to patients’:</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>39.1% (9)</td>
<td>8.7% (2)</td>
<td>39.1% (9)</td>
<td>23</td>
</tr>
<tr>
<td>Symptom management</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>39.1% (9)</td>
<td>8.7% (2)</td>
<td>39.1% (9)</td>
<td>23</td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>30.4% (7)</td>
<td>4.4% (1)</td>
<td>52.2% (12)</td>
<td>23</td>
</tr>
<tr>
<td>Risk for falls</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>34.8% (8)</td>
<td>8.7% (2)</td>
<td>43.5% (10)</td>
<td>23</td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td>0% (0)</td>
<td>13.0% (3)</td>
<td>26.1% (6)</td>
<td>8.7% (2)</td>
<td>52.2% (12)</td>
<td>23</td>
</tr>
</tbody>
</table>
Again, the following comments were offered by a few respondents further to this question:
   “Haven’t used it often enough yet”
   “Case managers are not instructed to use this for decision-making”
   “We are currently not using the data for post-discharge reviews”

Overall, the limited response to the C-HOBIC TSR questions and the responses received suggest
the need for a) more awareness and education regarding the potential of the C-HOBIC TSR, its
uses and potential benefits and b) more time to utilize the tool and identify opportunities for
use in care transitions.

Nevertheless, those answering the previous questions indicated that they would recommend
the use of the C-HOBIC TSR to colleagues ($n = 14$), across clinical settings ($n = 14$), in other
provinces ($n = 8$) and as informational support to patients and families ($n = 11$).

**Focus Group in Ontario**

Despite efforts to recruit a variety of participants to support the conduct of at least two focus
groups, only five individuals indicated their willingness to participate. Of these only three joined
the scheduled session in early December 2014. Managers contacted to assist with recruiting
participants cited multiple competing demands and the time of year as reasons for the limited
participation.

The purpose of the focus group was specifically to derive further insights into the participants’
experience and views of the C-HOBIC TSR as one of the ClinicalConnect™ reports available for
their review. At the outset of the focus group, participants were provided with a brief overview
of the purpose of the session and invited to introduce themselves. It was fortuitous that each
brought a perspective from a different care setting. It was at the point of introductions that
each of them proffered their generally positive views of C-HOBIC and the C-HOBIC TSR without
prompting. The primary points of discussion focused on 1) use of ClinicalConnect™ and
information that supports care transitions, 2) use of C-HOBIC and the C-HOBIC TSR and 3)
perceived and actual usefulness of the C-HOBIC TSR.

**Information Supporting Care Transitions**

The participants discussed the use and lack of use of data and reports to support care
transitions. In particular, they discussed how ClinicalConnect™ does support care transitions by
providing access to reports (e.g., consults, dictated notes, C-HOBIC TSR) that inform discharge
and care planning. But they also described the lack of comprehensive clinical notes, particularly
physician notes that are at times not readily available due to delays in dictation and
transcription. Regardless of availability, these notes usually do not include information
regarding functional status, continence and potential risks (e.g., skin breakdown) such as is
found in the C-HOBIC TSR. They also reported that information does not always follow the
patient and they still find it necessary to hunt for data; the CCAC and hospital notes are often
incomplete. Furthermore, while there is a lot of data available, it is difficult to know who is
using what and for what purpose. The fact that hospital staff are not using ClinicalConnect™ is viewed as being problematic because not everyone has access to the same information.

One of the positive aspects of the C-HOBIC TSR is that it is a “good snapshot” and a good overall summary of a patient’s status. The C-HOBIC TSR brings value by providing a good baseline for care planning; it helps one to know the patient. They speculated as to whether staff know how to use the C-HOBIC TSR data and also who else should be seeing it. The fact that not all patients have a C-HOBIC TSR is also viewed as problematic as it is fundamental to “knowing your patient.”

**Awareness of C-HOBIC and the C-HOBIC TSR**

Participants suggested that there is currently a low recognition of C-HOBIC by nurses and a need to “elevate the visibility of these data.” The C-HOBIC data are not always available in ClinicalConnect™ but this is likely due to the fact that C-HOBIC is not currently collected in some of the acute care facilities within these LHINs. These informants suggested that there may be value in holding a seminar including physicians and other clinicians; use stories from the experiences of ClinicalConnect™ users and help others to connect the value of the C-HOBIC TSR to their own practice. Overall they recommended raising the visibility of the C-HOBIC TSR across all care sectors and heightening awareness about where to find the report. The C-HOBIC data need to be translated for use (e.g., use cases, examples from practice) across all sectors by a wide variety of users.

Nursing undergraduate curricula were identified by one of the participants as another key means by which awareness of C-HOBIC and the C-HOBIC TSR could be raised. She described the impact of illustrating the use of C-HOBIC to nursing students as a means of providing evidence-based care. In particular, she cited an example of its use to support care transitions back to the home or long-term care. In general, “these are simple concepts to convey and demonstrate the informational value to clinicians” — “students love this”!

**Usefulness of the C-HOBIC TSR**

Overall the participants found the C-HOBIC TSR very intuitive and easy to understand and use, even without any formal education. It was viewed as a good baseline for care planning and providing a good understanding of an individual’s self-care ability. Participants also saw this as having value in caring for individuals over the long term especially those with chronic diseases such as chronic obstructive pulmonary disease. It was also suggested that the C-HOBIC would be useful as a component of the CCAC information system (Client-Related and Health Information System — CHRIS), particularly as it provides a “snapshot” view of patients, reducing the time spent going through pages of documentation.
Comments from the participants were resoundingly positive as they used phrases including the following:

- “so much faster to interpret”
- “it’s intuitive”
- “it can be used with other assessments like the RAI for care planning”
- “enhances communication”
- “C-HOBIC TSR is a ‘nice visual’”
- “helpful in ‘knowing’ the patient”
- “it’s another layer of knowing”
- “it would be great to have it integrated with CHRIS for dissemination to the community”
- “it could be helpful to geriatricians, physiatrists, GPs, GEM nurses, OT’s, PTs, SWs, primary care and the Healthlinks”

Overall there was substantive consistency in the messages received from the participants. This small but vocal group were clearly advocates for expanding the use of C-HOBIC and the C-HOBIC TSR.

The key findings from the survey and the focus group participants support that there is value being realized from C-HOBIC and the C-HOBIC TSR, but more importantly there is potential for more benefits to be gained across the continuum of care. As the access to ClinicalConnect™ has been gradually implemented over the last year, it is likely that user familiarity with and access to the C-HOBIC TSR are as yet limited. For this reason and from the findings of this evaluation, it would appear that the most important issues to be addressed in the future include:

- providing ongoing education and raising awareness regarding the existence and use of C–HOBIC and the C-HOBIC TSR, which might include a seminar or workshop demonstrating practice applications;
- reviewing which users/sectors might most benefit from its use and attending to their educational needs as a priority;
- considering the potential for integration with systems beyond ClinicalConnect™ (e.g., CHRIS);
- revisiting the curriculum integration of C-HOBIC concepts and use; and
- considering the development of an integrated care transition report within ClinicalConnect™ that includes all essential information in a comprehensive manner.
DISCUSSION AND RECOMMENDATIONS

Although some of the issues identified in this evaluation are related to the experience of adopting a new technology in nursing practice, opportunities to improve the collection and use of C-HOBIC and the C-HOBIC TSR in the future are clear. While some of the issues identified can be rectified with additional education and support, there are some fundamental application and process issues to be addressed. In particular, the experience of additional workload and lack of meaningful use of the C-HOBIC information and the C-HOBIC TSR in practice need to be reviewed and addressed.

In sum, the long-term success of initiatives such as C-HOBIC necessitates the use of a clinical information system that wholly integrates all aspects of clinical documentation and interfaces to relevant downstream systems (e.g., home care and long-term care for sending and receiving information). In terms of the ClinicalConnect™ portal, the creation of an integrated approach to clinical information specific to care transitions may benefit clinicians and patients alike. Furthermore, tools like the C-HOBIC TSR may be made available within other systems (e.g., CCAC — CHRIS) to extend its value to other providers who may not be using ClinicalConnect™.

Manitoba

The following recommendations are offered for consideration within St. Boniface and other provider organizations within the WRHA (e.g., long-term care and home care) regarding the implementation and use of C-HOBIC and the C-HOBIC TSR.

Application Design

*Identify opportunities for the elimination of redundant clinical documentation.*

*Provide sites with guidelines regarding the integration of C-HOBIC into clinical documentation systems.*

St. Boniface’s clinical documentation application design should be revisited and discussed in terms of the requirements for documentation. Streamlining required documentation and integrating C-HOBIC rather than segregating the measures would be worth considering. The C-HOBIC implementation support information should include guidelines for the most effective approach to integrating the outcomes into organization’s clinical documentation systems.

Other Assessment Tools

*Review existing standardized tools at the outset of implementation to determine whether any redundant tools are already in use.*
Revisit and clarify the purpose of C-HOBIC and differentiate from assessment tools being used for other purposes.

Emphasize the benefits of C-HOBIC including the TSC to support care transitions.

In this review, participants highlighted the need to clarify and differentiate the purpose of C-HOBIC from that of related tools (e.g., risk assessments) in order to reduce the perception of duplicate documentation.

Suggest that use of the Utilization Management (UM) tool for reviewing patients’ readiness for discharge should be reviewed as it relates to the TSC measure. Without knowledge of the dimensions captured by the UM tool, it is difficult to offer a specific recommendation regarding its use in conjunction with the TSC. It would be worthwhile to review the timing and application of each and also determine whether they serve the same or different purposes. It may be that the intent of the TSC needs to be reviewed with clinicians particularly for its value in supporting care transitions.

Limited Use of the C-HOBIC TSR

Re-evaluate the use and impact of the C-HOBIC TSR at 6- to 12-month intervals particularly as it relates to activities underway to increase information use and perceived value for management and practice.

Ensure clear and consistent processes and accountabilities for the generation, distribution and use of the C-HOBIC TSR especially in relation to patient transitions across sectors.

Review the education component of C-HOBIC related to the use of the C-HOBIC TSR to support care transitions.

Given the limited use of the C-HOBIC TSR at the time of the evaluation and the subsequent actions of the clinical leadership team, there is merit in revisiting its use in another 12 months. St. Boniface leadership has set expectations for the C-HOBIC TSR to be generated, reviewed and distributed at the time of discharge.

Applicability of C-HOBIC

Implementation sites should review the applicability of the entire C-HOBIC data set for different types of medical-surgical patients (e.g., cardiac, short-stay).

C-HOBIC implementation guidelines should clearly identify the intended clinical populations for use.
Clinicians indicated that the application of C-HOBIC to critical care and short-stay patients was inappropriate; indeed, C-HOBIC was not intended for use with either of these clinical populations. However, since the current approach to implementing clinical assessments tends towards the development of one assessment for all patients being admitted, consideration may need to be given for exceptions. For some medical-surgical (e.g., cardiac surgery) patients, it may well be that the information derived from pre-existing standardized assessments and clinical pathways may not be further enhanced by the use of C-HOBIC. C-HOBIC implementation information should provide sites with a clear identification of appropriate target populations for the application of C-HOBIC.

**Consistent Use of C-HOBIC and the C-HOBIC TSR**

- *Review options to increase the completion of C-HOBIC on admission and discharge for the purpose of clinical comparability.*
- *Continue the conduct of C-HOBIC completion audits.*
- *Review timing of C-HOBIC completion for surgical patients to optimize usefulness.*
- *Discuss opportunities to use C-HOBIC as a basis for discussions and discharge planning with patients and families.*
- *Review C-HOBIC education and training to address consistency of completion and potential use.*

The participants in this review identified inconsistencies in their practice as it related to C-HOBIC and the C-HOBIC TSR. It may be that demonstrating the potential value for care planning discussions will encourage greater compliance and use.

St. Boniface is conducting regular audits of the C-HOBIC completion rates on admission and discharge. It is recommended that these be continued.

Issues of duplicative work effort aside, it appears that the clinicians still lack full appreciation of the rationale for C-HOBIC. The St. Boniface leadership team is being deliberative in ensuring that the C-HOBIC measures and their intended use in practice are key components of the orientation for all new hires. Furthermore, the engagement of clinical practice leaders in the use of the C-HOBIC data for utilization review and linkages with other clinical data may also provide users with a clearer demonstration of uses and benefits.

**Long-term Care and Home Care use of C-HOBIC and the C-HOBIC TSR**

- *Continue to pursue the cross-sector flow of C-HOBIC information as clients move between sectors of care.*
Engage in multi-sector discussions regarding the potential value of C-HOBIC in supporting care transitions.

Revisit the long-term care and home care sectors to ascertain current use of C-HOBIC and introduce the C-HOBIC TSR.

There is strong clinical support for the use of C-HOBIC information to support care transitions, but it also clear that more effort needs to be directed to strengthening the processes of information exchange.

Apart from a lack of clarity regarding the accountability for the generation of C-HOBIC and the C-HOBIC TSR, it appears that the long-term care and home care sectors also need to be revisited regarding the use of same. The evaluator is uncertain as to how much orientation was provided to the long-term care and home care providers affiliated with St. Boniface.

The findings of this evaluation suggest that there is a need for more collaboration with multi-sector partners to discuss mutually acceptable processes for the exchange and use of the C-HOBIC information. Discussion with the senior leaders elicited their agreement of the need to convene a meeting with their colleagues from the other sectors to discuss the use of C-HOBIC, but that current circumstances may limit progress with home care in the near term. However, the WRHA leadership indicated potential opportunities for strengthening the use of C-HOBIC between acute care and long-term care.

Education and Training

Provide opportunities to learn about the C-HOBIC initiative and its use, separate from the training provided on the use of the clinical information system.

Provide post go-live follow-up education and support, including a multi-sector workshop for the sustainable and effective use of C-HOBIC outcomes and reports including the C-HOBIC TSR.

Learning activities related to C-HOBIC and its use are being integrated into the new hire orientation program at St. Boniface. As is often the case with the introduction of any new clinical tool, clinicians would probably benefit from having follow-up education and support to reinforce their initial learning about C-HOBIC. Providing an opportunity for focused discussions on the interpretation and use of outcomes data and drawing upon lessons learned from other clinical settings has been shown to be an effective teaching—learning strategy. Similarly, linking the C-HOBIC data with other clinical metrics such as ALC, length of stay, emergency department visits and readmission rates has also been shown to deliver clear messages about the value of reviewing and sharing this information between provider organizations. Within
other jurisdictions, significant value has been derived from holding clinically focused workshops to bring such illustrations of C-HOBIC’s value to clinical practice, patient care, organizational initiatives and system-wide processes (e.g., quality and safety improvements, accreditation). It is suggested that it may be worthwhile for St. Boniface and their affiliate organizations to consider hosting a workshop of this nature in the near future. Furthermore, some of the reports being used in other jurisdictions (Ontario) may also have value for the Manitoba C-HOBIC users; samples of these reports will be shared in the near term.

Ontario

Awareness of C-HOBIC and the C-HOBIC TSR to support care transitions

*ClinicalConnect™ users should be provided with information regarding the value and use of the C-HOBIC TSR when given initial access to the portal.*

*Emphasize the benefits of the C-HOBIC TSR as it supports care transitions; users currently deriving benefits might be encouraged to share examples of value with other clinicians using formal education venues (e.g., LHIN-based webinars and training sessions).*

*Leverage the Healthlinks initiatives as a means to convey the value of the C-HOBIC TSR to all sectors and clinical users.*

*Consider bundling C-HOBIC data with other discharge planning and follow-up care reports.*

*Within 6-12 months, re-evaluate the frequency of use and ClinicalConnect™ users’ perceptions of the value of the C-HOBIC TSR in a variety of clinical care settings.*

Informants in this review were strong proponents of the C-HOBIC TSR and might be further engaged to illustrate value to other clinicians and sectors. They identified a need to broaden clinician awareness of C-HOBIC and the C-HOBIC TSR across all sectors. The emerging Healthlink strategies may provide a useful vehicle for conveying the value of C-HOBIC in supporting care transitions. Users of the ClinicalConnect™ portal also indicated that there is an opportunity to integrate other relevant data/reports with the C-HOBIC TSR in order to reduce the time spent searching for information. As activities to increase awareness of C-HOBIC and the C-HOBIC TSR continue to unfold, there is merit in revisiting its use and users’ perceptions of its value in support of care transitions.
C-HOBIC and the C-HOBIC TSR beyond Acute Care

*Continue the pursuit of cross-sector flow of C-HOBIC information as clients move between sectors of care.*

*Engage in multi-sector discussions regarding the potential value of the C-HOBIC TSR in supporting care transitions.*

*Continue to identify opportunities for the adoption and integration of C-HOBIC in other care settings within each LHIN.*

The findings of this evaluation offered promising directions of clinician support for the use of the C-HOBIC TSR to support care transitions but highlighted the need for more efforts to raise awareness of its meaning and availability in ClinicalConnect™.

Having more acute care sites using C-HOBIC is desirable as those patients deriving benefit from the information are limited to those discharged from C-HOBIC sites. Now that the C-HOBIC TSR is available in ClinicalConnect™, further dialogue within the HNHB and WW LHINs may garner support for the implementation of C-HOBIC in additional acute care sites.

In addition, the perceived value of the C-HOBIC TSR for discharge and care planning led some participants in this evaluation to also suggest the possibility of having it integrated into their local information system (e.g., CCACs — Client-Health and Related Information System (CHRIS)).

**Education and Training**

*Provide post go-live follow-up education and support, including a multi-sector workshop for the sustainable and effective use of C-HOBIC outcomes and reports including the C-HOBIC TSR.*

*Revisit the potential to have undergraduate curricula incorporate the concepts of clinical data standards and application of C-HOBIC in practice.*

The HNHB and WW LHINs might also consider hosting a workshop focused on the array of reports available in ClinicalConnect™ to support care transitions, and specifically to provide an orientation to C-HOBIC and the C-HOBIC TSR for their clinical constituents.

A joint teleconference or webcast with participation from both Manitoba and Ontario may also be beneficial in terms of shared learnings and strategies to increase the use of C-HOBIC in practice, utilization management reviews, and in support of care transitions.

While earlier efforts to encourage undergraduate programs, specifically nursing, to integrate the concepts of clinical data standards and C-HOBIC into curricula were not successful, this
should be revisited. With the advent of the entry to practice informatics competencies for nurses, undergraduate nursing programs will likely be reviewing strategies and opportunities to address such content.
CONCLUSION

While there have been some challenges associated with the implementation of C-HOBIC and the C-HOBIC TSR in conjunction with online clinical documentation in the St. Boniface Hospital in Manitoba and with the ClinicalConnect™ portal in Ontario the focus of this evaluation was on the use and impact of C-HOBIC and the C-HOBIC TSR on practice and clinical communication among providers.

A finding consistent with the experience of other sites, sectors (e.g., acute care, long-term care) and jurisdictions is the need to cycle back to clinicians and managers to ensure the use of the C-HOBIC data to inform and review practice outcomes.

Discussion with the C-HOBIC senior leaders raised issues as to whether the timing of this evaluation may have been too soon to sufficiently determine the degree of C-HOBIC and C-HOBIC TSR integration and use in practice in both Manitoba and Ontario.

Notwithstanding the findings, limitations and recommendations of this evaluation, there is a prevailing belief among many participants that the cross-sector transmission of C-HOBIC in conjunction with other clinical data will only serve to further enhance the continuity of information and care delivered in all jurisdictions.
Appendix A: Online Survey Manitoba

The following survey is designed to better understand the use and perceived value of C-HOBIC information in clinical settings. In addition, we are seeking to understand the informational value of the C-HOBIC Transitional Summary Report to providers. The findings from this survey will be used to inform a future phase of the C-HOBIC implementation. Completion of the survey should take approximately 5-10 minutes. No responses will be linked to any individual respondent.

Upon completion of the survey, all respondents will be eligible for a draw to win an iPad (see details at the end of the survey).

*1. My primary position is:
   - [ ] Registered Nurse
   - [ ] Licensed Practical Nurse
   - [ ] Registered Psychiatric Nurse
   - [ ] Nurse Practitioner
   - [ ] Clinical Care Co-ordinator
   - [ ] Case Manager
   - [ ] Primary Care Physician
   - [ ] Dietician
   - [ ] Physiotherapist
   - [ ] Occupational Therapist
   - [ ] Social Worker
   - [ ] Other (please specify) ______________________________________________________________________

*2. What is your gender?
   - [ ] Male
   - [ ] Female
   - [ ] Other (please specify) ______________________________________________________________________

*3. Years of clinical experience?
   - [ ] 0-5
   - [ ] 6-10
   - [ ] 11-15
   - [ ] 16-20
   - [ ] >21 years

_____________________________________________________________________________________________
4. My primary work setting is:
- Acute care
- Home care
- Long-term care
- Primary care
- Complex continuing care
- Other (please specify)
- Rehabilitation care
- Palliative care
- Convalescent care
- Emergency Department

The following questions are about the collection and use of the C-HOBIC outcomes (e.g., functional status, continence, symptoms, skin breakdown, falls, & therapeutic self-care/readiness for discharge). For each statement, please indicate your level of agreement.

5. I am familiar with the C-HOBIC outcomes:
- Yes
- No

6. I have had the opportunity to review patients' C-HOBIC outcomes in the following setting(s):

Choose all that apply.
- None at all
- Acute care
- Home care
- Long-term care
- Primary care
- Complex continuing care
- Rehabilitation care
- Palliative care
- Convalescent care
- Emergency Department
- Other (please specify)
7. The information system used to document and/or retrieve the C-HOBIC outcomes is:

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</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Responsive</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8. The following statements relate to the collection and use of the C-HOBIC outcomes (e.g., functional status, continence, symptoms, falls, skin breakdown, & therapeutic self-care).

The C-HOBIC outcome measures:

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Are easy to use.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are relevant to the care of my patients.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inform my clinical practice.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Support clinical decision-making.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provide valuable insights to support patient care transitions.</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**9. Using the C-HOBIC outcomes has:**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improved the consistency of</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>clinical documentation.</td>
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</tr>
<tr>
<td>Any comments?</td>
<td></td>
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</tr>
<tr>
<td><strong>Added value to the</strong></td>
<td></td>
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<tr>
<td>assessment of my patients.</td>
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<tr>
<td>Any comments?</td>
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</tr>
<tr>
<td><strong>Been easy for me to</strong></td>
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</tr>
<tr>
<td>integrate into my practice.</td>
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<tr>
<td>Any comments?</td>
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</tr>
<tr>
<td><strong>Positively influenced</strong></td>
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</tr>
<tr>
<td>patient care decisions.</td>
<td></td>
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</tr>
<tr>
<td>Any comments?</td>
<td></td>
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</tr>
<tr>
<td><strong>Increased my workload.</strong></td>
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</tr>
<tr>
<td>Any comments?</td>
<td></td>
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</tr>
</tbody>
</table>

**10. Access to patients’ C-HOBIC outcome information has:**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Improved patient care</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>planning.</td>
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</tr>
<tr>
<td>Any comments?</td>
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</tr>
<tr>
<td><strong>Improved patient care</strong></td>
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</tr>
<tr>
<td>co-ordination.</td>
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<td></td>
</tr>
<tr>
<td>Any comments?</td>
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<td></td>
</tr>
<tr>
<td><strong>Improved the provision of</strong></td>
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<tr>
<td>appropriate interventions.</td>
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</tr>
<tr>
<td>Any comments?</td>
<td></td>
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</tr>
<tr>
<td><strong>Supported patient/family</strong></td>
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<tr>
<td>participation in care planning.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Any comments?</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
**11. I am likely to continue to access the C-HOBIC outcome information for my patients:**

- Yes
- No

Why or why not? [ ]

**12. I would recommend the C-HOBIC outcomes for use:**

Check all that apply.
- By my colleagues
- In other clinical settings
- In other provinces
- As informational support to patients and families
- Other (please specify) [ ]

**13. I am familiar with the C-HOBIC Transitional Summary Report (TSR):**

- Yes
- No

**14. I have had the opportunity to review patients' C-HOBIC outcomes using the Transitional Summary Report (TSR) in the following setting(s):**

Check all that apply.
- NONE AT ALL
- Acute care
- Home care
- Long-term care
- Palliative care
- Convalescent care
- Emergency Department
- Other (please specify) [ ]
15. I have had the opportunity to review the Transitional Summary Report (TSR) of the C-HOBIC outcomes as a component of (check all that apply):

- Electronic Health Record
- Printed Reports
- Other (please specify)

16. The C-HOBIC Transitional Summary Report (TSR) is:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Easy to interpret.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A useful snapshot of patient status.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Valuable in supporting patient care transitions.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>A good visual.</td>
<td></td>
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</tr>
</tbody>
</table>

Suggestions for improvement:

17. Use of the C-HOBIC Transitional Summary Report (TSR) has:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the continuity of care between care settings.</td>
<td></td>
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<tr>
<td>Improved the timeliness of communication between care settings.</td>
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<tr>
<td>Influenced patient care planning.</td>
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<tr>
<td>Influenced patient care decisions.</td>
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<tr>
<td>Influenced the provision of support to patients and families.</td>
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</tbody>
</table>

Any other impacts of the TSR?
**18. Use of the C-HOBIC Transitional Summary Report (TSR) has improved the timeliness of communication among members of the interprofessional team in relation to patients**:  

<table>
<thead>
<tr>
<th>Topic</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptom management</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk for falls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Any comments?

**19. Use of the C-HOBIC Transitional Summary Report (TSR) has improved the quality of communication among members of the interprofessional team in relation to patients**:  

<table>
<thead>
<tr>
<th>Topic</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don't Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td></td>
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<tr>
<td>Symptom management</td>
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</tr>
<tr>
<td>Readiness for discharge</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk for falls</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Risk for skin breakdown</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Any comments?

**20. I would recommend C-HOBIC Transitional Summary Report (TSR) be used:**

Check all that apply.

- [ ] By my colleagues
- [ ] In other clinical settings
- [ ] In other provinces
- [ ] As informational support to patients and families

Other (please specify)

**21. I would be willing to be contacted to discuss my experience with the use of C-HOBIC and the C-HOBIC Transitional Summary Report.**

- [ ] Yes
- [ ] No

**22. Please provide your email address:**
23. Would you like to participate in the iPad draw?

- Yes
- No

24. Would you like to review the contest rules?

- Yes
- No

Prizes:
Enter the C-HOBIC “Survey” contest (the “Contest”) by completing the above survey and be eligible to win one of two iPads.

Eligibility:
The Contest is open to residents of Ontario and Manitoba who have been selected to complete this survey. You are not eligible if you are an employee or representative of CANADIAN NURSES ASSOCIATION, or a member of the immediate family or household of any such employee or representative. For these rules, “immediate family” means spouse, mother, father, sister, brother, son or daughter.

How to Enter:
The Contest begins on September 30, 2013 at 00:01 AM (midnight) EST and ends on November 4, 2013 at 11:59 PM (midnight) EST (the “Contest Period”).

To enter, simply complete the attached survey. Provide the information requested and you will automatically be included in the Contest.

If you do not wish to be entered in the Contest, simply indicate same. You will then be excluded from the Contest.

Limit:
Participation in the Contest is limited to one (1) survey per person.

Random Draw:
The deadline for entering the draw is November 4, 2013 at 11:59 p.m. The draw will take place on November 12, 2013 at 12:00 p.m. The selected entrant will be randomly drawn from all entries received during the Contest Period. Odds of winning depend on the total number of eligible entries received during the Contest Period.

Drawing Notification:
Following the draw, an e-mail message will be sent to the entrant selected at the e-mail address specified from that person’s completed survey. The selected entrant cannot be contacted and confirmed a winner within four (4) weeks following the applicable draw date, the prize will be forfeited.

25. Please provide the following information to qualify for the draw.

Name
Phone Number
eMail Address

Many thanks for your participation in this survey. Your feedback is important and will be utilized to inform the next phase of C-HOBIC and the TSR implementation.

If you have any questions or would like more information about C-HOBIC, please contact:

Peggy White, National Project Director at pwhite@hobic-outcomes.ca.

This evaluation has been made possible through the support of the Canadian Nurses Association and Canada Health Infoway.
Appendix B: Online Survey Ontario

The following survey is designed to better understand the use and perceived value of the C-HOBIC Transition Synoptic Report (TSR) that is available on the ClinicalConnect portal. Specifically, we are seeking to understand the informational value of the C-HOBIC TSR to the clinical team. The findings from this survey will be used to inform a future phase of the C-HOBIC implementation. Completion of the survey should take approximately 5-10 minutes. No responses will be linked to any individual respondent.

Upon completion of the survey, all respondents will be eligible for a draw to win an iPad (see details at the end of the survey).

*1. My primary position is:

- [ ] Case Manager
- [ ] Clinical Care Coordinator
- [ ] Dietician
- [ ] Emergency Medicine Physician
- [ ] Family Medicine Physician
- [ ] Medical Resident
- [ ] Nurse Practitioner
- [ ] Occupational Therapist
- [ ] Pharmacist
- [ ] Physician - Specialist
- [ ] Physiotherapist
- [ ] Registered Nurse
- [ ] Registered Practical Nurse
- [ ] Social Worker
- [ ] Surgeon
- [ ] Other (please specify)

*2. What is your gender?

- [ ] Male
- [ ] Female
- [ ] Other (please specify)
**3. Years of clinical experience?**
- 0-5
- 6-10
- 11-15
- 16-20
- >21 years

**4. My primary work setting is:**
- Acute care
- Emergency Department
- Ambulatory care
- Home care
- Long-term care
- Primary care (FHT, PHO, Family Practice)
- Other (please specify)

Community Care Access Centre
Nurse Practitioner Led Clinic
Complex continuing care
Rehabilitative care
Palliative care
Convalescent care

The following questions are about your access and use of the C-HOBIC TSR using ClinicalConnect.

**5. How often do you access ClinicalConnect for patient information?**
- Never
- Rarely
- Weekly
- More than once a week
- Other (please specify)

**6. I am familiar with the C-HOBIC Transition Summary Report (TSR):**
- Yes
- No
C-HOBIC Transition Synoptic Report (TSR)

*7. The C-HOBIC Transition Synoptic Report (TSR) is:

- Easy to interpret.
- A useful snapshot of patient status at discharge.
- Valuable in supporting patient care transitions.
- A good visual.

Suggestions for improvement:

[Blank space for input]
**8. Use of the C-HOBIC Transition Synoptic Report (TSR) has:**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved the continuity of care between care settings.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Improved the timeliness of communication to providers in post-discharge care settings.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Influenced patient care planning.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Influenced patient care decisions.</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Influenced the provision of support to patients and families.</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<td>○</td>
</tr>
</tbody>
</table>

Any other impacts of the TSR?

**9. Use of the C-HOBIC Transition Synoptic Report (TSR) has improved the **TIMELINESS** of communication among members of the interprofessional team in relation to patients:**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Symptom management</td>
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<td>○</td>
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</tr>
<tr>
<td>Readiness for discharge</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Risk for falls</td>
<td>○</td>
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<tr>
<td>Risk for skin breakdown</td>
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</tbody>
</table>

Any comments?

**10. Use of the C-HOBIC Transition Synoptic Report (TSR) has improved the **QUALITY** of communication among members of the interprofessional team in relation to patients:**

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional status</td>
<td>○</td>
<td>○</td>
<td>○</td>
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<tr>
<td>Symptom management</td>
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<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Readiness for discharge</td>
<td>○</td>
<td>○</td>
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<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Risk for falls</td>
<td>○</td>
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<td>○</td>
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<tr>
<td>Risk for skin breakdown</td>
<td>○</td>
<td>○</td>
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<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

Any comments?
11. I would recommend use of the C-HOBIC Transition Synoptic Report (TSR):

Check all that apply.

☐ To my colleagues
☐ Across all clinical settings
☐ In other provinces
☐ As informational support for patients and families

Other (please specify)

*12. I would be willing to be contacted to participate in a focus group to further discuss the C-HOBIC Transition Synoptic Report.

☐ Yes
☐ No

*13. Please provide your email address:

*14. Would you like to participate in the iPad draw?

☐ Yes
☐ No

15. Would you like to review the contest rules?

☐ Yes
☐ No
Appendix C: C-HOBIC Transition Synoptic Report Graphic

![C-HOBIC Transitions Report Graph](image-url)
## Appendix D: C-HOBIC Transition Summary Report, St. Boniface Version 2013

### CHOBIC Transition Summary

**CHOBIC, test1**  
**58y 05-Feb-1955 Female**  
**MRN: 01501036**  
**SBGH.A750-A7027-02**  
**Reg: 5452452452**  
**PHIN: 542452345**

**Language - Rajasthani**  
**Interpreter - No**

This report provides a summary (i.e., a synoptic report) of the patient's C-HOBIC scores on admission and discharge. The scores have been normalized to provide a quick visual snapshot.

<table>
<thead>
<tr>
<th>CHOBIC Scale Name</th>
<th>Admission</th>
<th>Discharge</th>
</tr>
</thead>
</table>
| ADL Activities of Daily Living - Higher score reflects greater need for assistance.  
Summary ability to bath, transfer to toilet, ambulate and feed | 1.24 | Incomplete |
| 0- independent | 1- set up help/supervision | 2- limited assistance | 3- extensive assistance | 4- total dependence |
| Bladder Continence - Higher score reflects increasing incontinence | 3.00 | 1.00 |
| 0- continent | 1- control with catheter | 2- infrequently incontinent | 3- frequently incontinent | 4- incontinent |
| Pain - Higher score reflects greater intensity of pain | | |
| 0 - No Pain | 1 - Mild | 2 - Moderate |
| 3 - Severe | 4 - Worst Possible |
| Fatigue - Higher score reflects greater fatigue when performing normal daily activities | 4.00 | 3.00 |
| 0 - None | 1 - Minimal, diminished energy but completes normal day-to-day activities | 2 - Moderate, due to diminished energy unable to finish normal day-to-day activities | 3 - Severe, due to diminished energy unable to start normal day-to-day activities | 4 - Unable to commence any normal day-to-day activities due to diminished energy |
| Dyspnea - Higher score reflects increasingly greater levels of dyspnea | | |
| 0 - Absence of dyspnea | 1 - Absence at rest but present when performed moderate activities | 2 - Absent at rest but present when performed normal day-to-day activities | 3 - Present at rest |
| Nausea - Higher score reflects increasingly greater levels of nausea | | |
| 0 - No nausea | 1 - Mild nausea, occasionally experienced but does not interfere with eating and/or activities | 2 - Moderate nausea, interferes somewhat with eating and/or activities most days | 3 - Severe nausea, interferes daily with eating and/or activities | 4 - Incapacitating: remittent in bed part of each day due to nausea and interferes with eating |
| Falls | | |
| 0 - No falls in the last 90 days | 1 - No fall in last 30 days but fell 31-90 days ago | 2 - One fall in last 30 days | 3 - Two or more falls in last 30 days |
| Pressure Ulcers | | |
| 0 - No pressure ulcer | 1 - Any area of persistent skin redness | 2 - Partial loss of skin layers | 3 - Deep crater in skin | 4 - Breaks in skin exposing muscle or bone | 5 - Unstaged |
| Therapeutic Self Care - Higher score reflects the greater need for assistance. Summary of a person's knowledge and ability to take their medications, manage their symptoms and perform everyday activities and ability to contact someone if there is an emergency | | |
| 0 - Assistance not required | 1 - Minimal Assistance Required | 2 - Heavy Assistance required |

### Confidential Patient Information

Report Requested By: Truskov, Mariana (Analyst)  
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