Care Continuation Project Summary

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Background

At BC Children's Hospital and within the UBC Department of Pediatrics, the need for improvement in discharge planning and care continuation became a high priority in 2015. Child Health BC, a unifying network for the child serving health services across health authorities and sectors was in the best position to engage the many parts involved in the health services for children in an effort to improve the continuation of care from BCCH, to community providers and teams. Child Health BC agreed to resource the work with project management leadership, a project coordinator and other staff as needed.

The initial challenges as identified in the Charter[1] included:

- Lack of role clarity of different health care providers' responsibilities in terms of care continuation planning and delivery
- Inappropriate use of professional time, especially with pediatric residents at BCCH who were spending too much time on non-clinical duties related to discharge and care continuation
- A perception of overlaps and duplicative services
- Reported gaps in continuity of care from one provider to the next, in particular with transitions to community regional providers
- Reported lack of understanding of the patient/family community context of services
- Systematic communication barriers preventing the flow of information from BCCH to community providers
- An unclear desired future state

Purpose of this report

This report describes the process and outcomes of the project, and includes both the recommended future state and a transition plan for operational implementation. The intended audience is the Care Continuation Oversight Committee, BCCH operational leaders and UBC Pediatrics. An Excel document contains details about each tool, documents, contacts, risks and mitigation. A series of supporting documents is listed at the end of this report for the reader's reference.

As per the Charter, the project explored and described the current state and challenges through an extensive stakeholder consultation process, a year of observations and exploration of unit based activities on the Clinical Teaching Unit (CTU) of BCCH. A literature review and exploration of promising practices internationally was also completed. Following achievement of an in-depth understanding; intensive working meetings with diverse and multiple stakeholders, a proposed Care Continuation Model (Algorithm) was created including a two part model and a series of tools for implementation of the model. Using a quality improvement approach, five key tools and associated processes were

[1] Care Continuation Project Charter, signed by Dr. Maureen O'Donnell in December 2015 after approval by the CCI Project Executive Oversight Committee.

developed, tested and recommendations created for them. Two additional tools have been identified in the future state model, but have not yet been designed.

The project concluded in September 2016 with recommendations and a transition plan.

The Care Continuation Model

Stratification of Patient Groups

The literature regarding the stratification of groups of children based on their medical complexity in the context of care continuation revealed a number of validated strategies. These were used for selection of patients for services and programs related to care continuation (CC). The CC working group also found that the recommended activities related to care continuation were different, depending on both the medical and psychosocial/system complexities of the child's continuing care after hospitalization. The pediatric medical complexity algorithm used by Seattle Childrens' was used to inform the project's resulting patient groups, for the purposes of designing the recommended strategies for care continuation. They are differentiated based on medical complexity and it is acknowledged that the psychosocial and system complexities may apply in all groups.

Group 1

Child has **non-chronic** illness expected to last less than 1 year. Children can typically have their post discharge service needs met by Tier 1, 2 or 3a service. May use health services beyond what is typical for a child for a limited time. Psychosocial or service system complexities may need to be addressed to meet continuing care needs. **Children are not likely to need ongoing care from BCCH.**

Group 2

Child has **chronic condition** expected to required ongoing team-based services for a period over a year. Children can typically have their service needs met by Tier 2 or 3a services. May require intermittent consultation with Tier 4 teams. Examples include diabetes, Cohn's disease, asthma etc.) . May or may not have significant psychosocial system barriers in addition to medical complexity.

Group 3

Child has multiple system chronic conditions expected to require ongoing multiple team based health services. Will required significant health, social and education support throughout child's life. These children will typically need Tier 3b or 4 services for their continuing care. The burden of care on the family is significant and psychosocial support need is expected.

The available data was reviewed to determine if proxy measures such as number of subspecialists consulted, length of stay and numbers of admissions could provide an estimate of proportion of these groups, however this is limited, so a "snapshot" of a 7 week period provides a preferred estimate of proportion.

CTU Patient Census July 11 - August 25/2016			
Week #	Group 1	Group 2	Group 3
1	8	10	7
2	5	11	10
3	3	7	7
4	10	8	8
5	9	6	6
6	7	7	4
7	7	6	5
Total	49	55	47
	32.88%	36.91%	31.54%

Notification of admission and community care providers fax back (Tool 1)

Recognizing the role of the family physician, or pediatrician as the primary "medical home" for children in their community is foundational to the care continuation that happens before and after a child has an episodic hospital stay. Community physicians, and other teams involved in a child's care in their community were not systematically made aware of a child's admission to BCCH. They expressed concern that their lack of awareness, and opportunity to provide and receive information made their role in follow up challenging and often delayed. Ensuring the community providers are aware of a child's admission and linking them to the BCCH care team became the first goal of the model of care continuation.

A manual process of faxed notification of admission with a request for the community physician to fax back the form to the BCCH unit was tested on the CTU only. The process and version 1 of form was tested, followed by a review of feedback and a revision which resulted in version 2.

Along with positive anecdotal feedback from community physicians who appreciated knowing their patient was admitted, there was an 80% "fax back" rate, with community physicians faxing them from back to the unit with the information requested. Other observed outcomes included:

- Community physicians agreed to provide office appointment scheduling priority to children admitted to hospital in order to meet the request for follow up.
- Some physicians contacted residents/physicians by phone to discuss patients.
- Requested clinical information was provided (i.e. growth charts)
- In two instances, community physicians, being aware of admission called the unit to talk with child's parent.

Electronic notification process is being planned by the CST and operations teams for BCCH, Health Information Management, and IMIT. The timing of this work is undetermined at this point and depends on a number of factors, including the experience of both Lions Gate Hospital and Fraser Health Authority implementation of electronic notification this summer.

The manual notification and fax back process continues on CTU, and could be considered for expansion, depending on timeframe for automated solution.

Rounds Checklist (Tool 2)

Daily bedside rounds are an important part of the care provided to children and family by BCCH's CTU teams. These rounds provide an opportunity for discussion of the child's clinical status, disposition planning and identification of unmet child and family needs, as well as resident and medical student teaching. Despite the importance of these daily rounds, a tool to summarize the information shared and ensure that important points in the daily management and care continuation are covered was lacking. Feedback from the larger team revealed that the child and family's care continuation needs are often not identified and discussed proactively during rounds and discharge may be delayed as a result. In addition, interventions such as IV fluid rates, medication dosing and the intensity of monitoring are not routinely reassessed, which may also contribute to delays in discharge.

A checklist is used in the BCCH PICU served as the starting point for the development of the CTU rounds checklist. The CTU rounds checklist was developed with input from CTU residents and physicians, 3M/3F nurse leaders, and allied health team members. There were also discussions about the checklist had with the CTU Resident Subcommittee and with the Chief Residents.

The checklist was laminated and placed on the carts used by CTU for daily rounds. The checklist was verbally reviewed by the resident after presenting the patient and formulating a plan of care for the day.

Communication about the practice change came through routine resident email communications from the Chief Residents, and most importantly, through daily discussions on rounds. At the commencement of each four week resident rotation on CTU, residents were oriented to the checklist and feedback welcomed. The checklist was subsequently reviewed and revised over several iterations based on feedback from stakeholders. A potential risk with making additions is that increasing the length of the checklist may discourage its use in the context of a busy and often rushed rounds setting.

When used consistently, feedback around the checklist has been very positive. Reported benefits include:

- Early identification of supply and equipment needs for discharge, providing time to organize supplies and provide adequate patient and family teaching
- Routine review of the suitability of transfer to a community hospital at the appropriate Tier of Service
- prompts to ensure the Notice of Admission has been sent to community providers and that care continuation planning in collaboration with community providers is ongoing

Reports from involved stakeholders are that the success of the rounds checklist on any given CTU rotation depends largely on the engagement of the Senior Resident and the Attending Pediatrician.

Dr. Mia Remington, CTU Pediatrician, has been selected as a CFRI Hudson's Scholar and will begin work on a quality improvement project looking at standardization of discharge criteria for common diagnoses on CTU. As part of this work, she is considering transitioning the current checklist into a paper form that lives on the patient's chart or bedside clipboard and is reviewed daily on rounds. It is recommended that CTU Senior Residents continue to be aware of the checklist and are supporting its daily use on rounds.

Patient Oriented Discharge Summary (Tool 3)

In order to support **family centred discharge processes**, a tool called PODS (Patient Oriented Discharge Summary) was implemented on 3F in June 2016. This tool was adapted from one designed and tested in Ontario, inclusive of pediatric units at Sick Kids and Holland Bloorview. Some additional testing was also done with BCCH CTU patients, with some very positive feedback.

The results of PODS use so far includes **early and ongoing** conversations about care continuation needs after discharge, as well as a tool that families can use to record the information they need in their own way. It is expected that there will be less "last minute" planning for discharge and find PODS to be a place to bring your teaching with families together for them.

PODS helps families with five key pieces of information that they need to know in order to effectively manage their child's health after a hospital discharge.

In addition, PODS includes key questions to identify potential **non-medical barriers** to a family's safe transition from hospital to home, as early as possible.

After consultation with the Ontario Learning Lab, who designed the PODS and the nursing leaders at Sick Kids who implemented the tool; a preliminary test was done by the Continuing Care Coordinator on CTU. The unit context, and both family and provider feedback led to a decision to proceed to full implementation on 3F, for both CTU and other service patients. The preparation was significant and included

- A unit champion with designated time for preparation, education and focus during the implementation
- A pre implementation survey of providers and families
- Development and sharing of "edu-quicks" , posters and emails
- Education and process integration to guide staff and physicians to early and ongoing care continuation planning with families

Pre-PODS survey

Less than half of families surveyed report receiving written information

90% of families said no one asked if they had a plan to get home.

Less than half of families report that the health care team helps them plan for when they go home.

71% of families said that no one asked them if they had a way to pay for medications.

Less than half of providers agree or strongly agree that it is easy to help families understand what they need to know to care for their child at home

70% of providers agree that discharge teaching starts to close to discharge

- "Pre-PODS surveys were completed in person by one of the CCI team members on 3M and 3F at BCCH. Families (n=21), Providers (n=27)

PODS Results to date

While there has been positive staff comments, and some excellent examples of PODS tools completed by families, a number of factors have prevented the uptake of the form and its associated practice change, sufficiently for a "post PODS' evaluation and going forward recommendations. These include:

- Insufficient time for a significant practice change – bedside nursing staff do not understand they have a pivotal role in discharge planning, and most team members are not acting on conversations about discharge early.
- Implementation during the summer, when absences of key leaders takes place. In particular, Clinical Nurse Leads and Clinical Nurse Educators
- A change over in unit management (A new manager was hired just prior to implementation) Change over in pediatric resident teams in July
- Care Continuation Coordinator on the unit reduced to 2 days a week, due to a new job assignment.
- An unusually high census and acuity of patients as compared to what is expected in summers.
- A documented high incidence of complex chronic patients whose families had alternative care continuation processes and tools.

It is recommended by the unit leadership that PODS be continues through the fall, and be expanded to other inpatient units. Uptake should be monitored, and following assurance of uptake an evaluation, including a "post PODS" survey will be completed by Child Health BC and reported out.

Provincial Care Continuation Resource Tool (Tool 4)

While health services that are provincial (i.e.: Home Enteral Nutrition program, Travel Assistance Program) have referral paths through BCCH and government contacts, the psychosocial and system challenges that families faced were presenting different referral challenges. Most often the psychosocial and system challenges are best directed to community level supports that can provide ongoing contact with families, and are part of that communities' network of services. The process of exploration of roles with Social Work, Public Health Nursing, and Aboriginal Health revealed that BCCH providers were not clear on each other's roles, and were not working in concert.

The different referral streams resulted in the creation of two tools, one to guide BCCH staff to provincial health program resources (Tool 4), and the other (Tool 5) to help them make and communicate referrals that will continue in the community. (Public Health, MCFD)

While there is web based information and contacts for the provincial programs however, they require an internet search. A two page resource document pulled together the key provincial resources and some base information about who can use the resource, and how to access. The resource tool includes:

- Accommodation
- Medication Coverage
- Supplies and Equipment
- Travel Assistance

This tool has not yet been implemented or evaluated, so that is the next step.

Care Continuation Communication Tool (Tool 5)

A standardized interdisciplinary tool for communication and tracking of care continuation planning was tested to address the following gaps in the non-medical aspects of care continuation planning.

- Communication amongst BCCH health care team members around non-medical care continuation planning is often shared verbally, and is not routinely documented on the patient chart or a record that is used collaboratively by the BCCH care team.
- CTU discharge summaries sent to community GPs and Pediatricians frequently do not contain information about non-medical care continuation planning activities. (i.e. referrals to Public Health, funding sources for medical equipment and supplies, etc.)
- A systematic tool to support information sharing amongst health care team members, both internally and with the community, was needed.
- Timely referral to the appropriate provider (i.e. Public Health) is not clear or documented, and does not have criteria understood by all members of the team.

The first version of the tool was the Care Continuation Referral Guide, and provided indications for referral to various team members and provincial programs. It was intended to provide guidance on the reasons for referral and to identify the most appropriate provider to refer to, in addition to providing some documentation of the resulting actions.

Pre-implementation feedback on the referral guide from CTU residents and the Care Continuation Executive Oversight Committee was that the tool required simplification and streamlining to encourage successful uptake. The referral guide was subsequently changed to the Care Continuation Communication Tool and detail about reasons for referral were left only for public health, as this was the most commonly missed consult. A separate resource guide to compliment the communication tool has been created but has not yet been tested (as of August 30, 2016). This is described above as the Provincial Care Continuation Resource Tool (Tool 4)

Prior to implementation, the proposed communication tool was shared with BCCH stakeholders including the Community Liaison Nurse, Occupational Therapy, Clinical Nurse Coordinators, Social Workers and CTU residents, amongst others. Both leaders and front line staff were consulted.

Discussions were carried out with the Clinical Resource Nurse working with the C&W Redevelopment Project Model of Care group on the development of a standardized "Care Plan" for inpatient medical and surgical units, to ensure that the intended purposes of these two tools did not overlap and to see opportunities for one tool.

The tool was tested with all CTU patients on 3M and 3F in August 2016. The document was kept in the front of the patient chart and reviewed daily on rounds. Health care team members were encouraged to document any actions or referrals made as part of the medical and non-medical care continuation planning on the communication tool. CTU residents were encouraged to use the information collected on the communication tool through the child's hospital stay to inform the discharge summary, ensuring that important aspects of the care continuation plan were shared with the community primary care providers.

Reported results included

- Improved interdisciplinary team communication amongst BCCH providers around care continuation planning
- Earlier referrals and connections to community resources, practical supports and provincial programs
- Ease of access to clear and concise information for the purposes of creating a preliminary discharge summary by CTU residents.
- In some cases, there was a missed referral to public health, suggesting providers may still have a need for more information about indications for referral to public health.

Next Steps

- Continue use of the tool with all CTU patients, with the addition of public health referral guidance.
- Complement testing with the Provincial Care Continuation Resource Tool
- Formal audit of uptake of the communication tool and evaluate.
- Consider expansion of the communication tool to teams outside of CTU
- Consider modifying to provide a record of care that can be shared with community providers

Group 3 (complex chronic) requirements for Care Continuation – The theme of time

As described in the future state model, there are foundational care continuation practices that will be needed for all children admitted to BCCH, and their families. The above five tested tools are applicable to all groups of patients. It is clear in the literature, in experience and in stakeholder involvement that the most complex children present need for more intensive and time consuming activities. Their care both inside and outside the hospital includes many more providers and multiple teams. The activities related to communication among multiple teams and many providers who each hold a part of the plan of care are essential.

The last phase of the project included focused attention on this group of patients in an effort to test the activities and tools in the Care Continuation Model specific to group 3, and to provide information about the quantity of time involved, and the skills needed for the activities. The following describes the experience of suggested next steps from this work, and is organized by the activity groups identified in the Continuing Care Model for group 3 patients.

Documentation of the Continuing Care Plan

The Continuing Care Communication tool (described previously) was tested with focus on group 3 patients and was found to be very well received and effective for identifying referral needs, for briefly documenting the actions taken and status, and for identifying the time and person responsible for the action. It was particularly well received by teams caring for the more complex patients, and the information is being used by residents in their preliminary discharge summary. This represents a significant improvement in the sharing of non-medical information in the preliminary discharge summary. Samples are provided in the detailed transition document. While the uptake and feedback relating to this tool's use for complex patients is very encouraging, its use independent of the project will need ongoing attention by UBC and BCCH leaders.

Some providers suggest that this document be modified and become part of the patient record and shared with community providers for complex children as a continuing care plan. The transfer form used to transfer children from BCCH inpatient to Sunny Hill has been identified as an effective care continuation tool and may also inform the evolution of the Continuations Care Communication tool.

It is recommended that these considerations be included in the previously planned review of the preliminary discharge summary by the Department of Pediatrics.

Bringing team members together for Care Continuation Planning (Before, during and after hospitalization) – what does it take?

In addition to the telehealth case conference described following, the project care coordinator explored and facilitated teleconferences to bring community and BCCH teams together. This usually occurred too close to discharge for planning, but when done early enough a discharge/care continuation plan was created. It was reported that without that meeting this would not be possible. In one case observed, a child was sent home after a genetic diagnosis, and being seen by six different services while there had not been a discussion about continuing care planning. It is suggested that complex children require a minimum of weekly team meetings with involved teams.

A particular time consuming challenge arises for complex children when

"Allied Health are great with care continuation and contact patient's community allied health providers if they have them"

"Every time I have talked with providers in community, I have overwhelmingly positive responses

they are in the care of MCFD. A case example required hours of coordination / discussion time with the BCCH social worker and a number of MCFD worker across the province. As the conversation required a person knowledgeable clinically, the project coordinator filled that role.

In addition to the daily rounds which can take over 2 hours a day, there are also allied health rounds weekly for up to an hour. These processes may benefit from process improvement to shorten the time required from nursing an allied health to contribute to the care planning.

> *Your note from the teleconference was a most informative way to share the information - it was concise and straightforward. These are so beneficial yet also underutilized"*

Telehealth case conferences

The use of telehealth for case conferences is a new concept to inpatient units, but is a very promising practice for group 3 patients in particular. A test case conference was done for a patient from a rural community. The result was very effective for all BCCH and community provider involved. It took the CCI project coordinator 3 hours to identify and contact the involved 7 providers from BCCH and 5 from the community. Community included a pediatrician, MCFD, foster parent and others. It is suggested that the care team is in the best position to identify the community providers for a case conference, but that clerical support would be appropriate to contact them and liaise with the Telehealth booking staff.

In summary, the experience documented with testing the activities specific for group 3 patients in the algorithm require dedicated time, clinical knowledge and insight in the provincial health service system. The activities that are needed in addition to those for group 1 and 2 include:

- Identification of community providers who have been, or will be involved in a child's services
- Contacting community providers proactively, both early in the hospital stay and throughout the stay. This can be up to 10 or more providers who may not know of each other's involvement.
- Facilitating care conferences with community and BCCH providers a minimum of weekly for group 3 patients.
- Ensuring that the results of multiple providers' information are pulled together and documented.
- Being a central contact for providers seeking information or input, beyond what is documented. [2]
- Educating and promoting use of the Tools in the algorithm – supporting practice change for all patient groups.

> *"Too much time is spent on the phone trying to reach community providers"*
>
> *"As nice as it would be to give (community providers) updates, there simply isn't enough time for communicating with them"*
>
> *Things don't happen until right before discharge because they are not paramount when we have sick children we are also caring for.*

[2] It is noted that providers will choose a contact for an update, rather than using or referring to a document such as the Care Continuation Communication plan or the health record.

- Evaluating and improving processes for care continuation.
- Sharing in the support of culture and practice change about care continuation vs discharge planning.

In conclusion

This collaborative project with Child Health BC, BCCH and UBC Department of Pediatrics leadership has created and documented a clear understanding of the barriers to effective care continuation for children admitted to BCCH as in patients. A future state model was created and refined numerous times based on feedback from many stakeholders from a number of disciplines and from both BCCH and community. An approach that includes stratification by medical complexity and inclusion of psychosocial / system challenges resulted in two care algorithms, with graphic display of the chronology and supportive tools. Proposed role descriptions support the algorithms. Five tools were developed and tested and show promising preliminary results in improvement of care continuation for all patients/family.

As a project defined by its Charter, the work is now transitioning to BCCH and UBC Pediatrics for operationalizing the tools and associated practices. Details or the project and tools are provided in the following supporting documents.

Supporting documents

Project Charter: Provides the background, purpose, structure and accountabilities of the project.

Literature Review: A comprehensive description which provides summaries of the evidence available about care continuation and the models and frameworks for care continuation, including best practice tools and measures, existing programs and outcome evaluation strategies.

Full Report of Project: A comprehensive report of the initiative, designed for external audiences.

Stakeholder Transition Plan Draft: A table of issues, activities and accountability for discussion with the Oversight Committee of the project as the project transitions to operations from Child Health BC.

Group 1 and 2 Continuing Care Algorithm: Graphically displays the future state Care Continuation Model for BCCH inpatients in group 1 (non-chronic) and group 2 (chronic, non-complex)

Group 3 Continuing Care Algorithm: Graphically displays the future state Care Continuation Model for BCCH inpatients in group 3 (chronic-complex)

Proposed roles in the Care Continuation Algorithm: Describes who is in the best position to be responsible for the activities in the model.

Detailed Transition Plan (Excel): A multi-tab Excel Spread sheet population with all relevant documents, key contacts and references, created to support transition of the work done. Includes a summary, the forms tested, samples, education tools, and next steps for each tools and for over all practice change related to care continuation.

Tools

1. Notification and Fax Back (Versions 1 and 2)
2. Rounds Checklist (Versions 1, 2 and 3)
3. PODS (Version 1)
4. Care Continuation Resource Support Tool (Version 1)
5. Care Continuation Communication Tool (Version1 and 2)