CCAC Care Coordination Cost Analysis:

CCAC & Care Coordinator Interview Findings

Applied Health Research Question Evidence Brief

HEALTH SYSTEM PERFORMANCE RESEARCH NETWORK (HSPRN)

Report prepared by: Dr. Ellen G. Schraa & Dr. Walter P. Wodchis

November 2013

Executive Summary

This report summarizes potential approaches to allocating care-coordinator resources to individual home care clients in Ontario. The findings of this report are based on accounting and financial management standard practices and interviews with 11 representative care coordinators and directors at three Ontario Community Care Access Centres (CCACs).

Interviews confirmed three main care coordinating activities: 1) intake, 2) ongoing care coordination, and 3) episodic care coordination. Interviews also highlighted that there was no average or 'typical' case and care coordination needs varied depending on many client factors. For instance, a language barrier can triple the amount of care coordinator time in completing an assessment and a client's cognitive ability can influence medication compliance and ability to get along with care providers influencing on-going care coordination time and episodic or infrequent care coordinator effort.

To proxy for care planning and set-up, care coordinators suggested the number of services (e.g. nursing, physiotherapy, personal support) as a primary cost driver since setting up services for each client is more resource intensive than the intensity of care or hours of care within each service type. Episodic care needs may be evident from an increase in notes and tasks triggered from notes, an increase in nursing frequency, home making services, or overall increase in the number of caregivers and services involved in client care.

Current workload reporting includes contacts with clients but is not specific to the intensity/duration of these contacts. The care coordinators noted a number direct client care coordinating activities that are not currently counted/captured through workload reporting including coordination with other CCAC staff and care providers outside of CCAC including support services and physicians. The duration of assessment time is also not recorded. These are substantive limitations to the current workload tracking systems that should be addressed.

We recommend a workplan for comparing client-specific cost drivers with current workload measurement using client-level data for 5 different client groupings. We also recommend improved workload measurement for care coordinators to track

time spent on major client-contact activities (e.g. the length of time taken for client assessments), and time spent in internal and external coordination activities that do not directly involve clients (adhering to the current minimum of 5 minute threshold of activity for an individual client).

Table of Contents

A. Context

The pressure to understand health care costs is a fiscal reality for providers and payors of health care services. Accurate cost estimates are vital for setting realistic budgets for providers and providing appropriate incentives. In Ontario, the Ministry of Health & Long Term Care has been long committed to moving toward a patient-based funding model to improve inequities in funding to providers and influence organizational and resource allocation efficiency. At the organizational-level it is necessary to understand costs for making informed resource allocation decisions within the organization.

Community Care Access Centres (CCAC) were established by the Ministry of Health and Long-Term Care in 1996 to help the public access government-funded home and community services, and long-term care homes. CACCs coordinate services for seniors, people with disabilities and people who need health care services to help them live independently in the community. Staff at the centres provide information and coordinate professional, personal support and homemaking services for people living in their own homes, and for school children with special needs. CCAC generally do not employ the staff who provide direct care but rather organize, coordinate and pay for the care by contracting with home care service provider agencies. CCACs also determine eligibility and make arrangements for admission to some day programs, supportive housing/assisted living programs, and to certain chronic care and rehabilitation beds, and to all long-term care facilities. The staff who provide this information and services are CCAC care coordinators. Care coordinators are nurses, social workers and other professionals who determine the eligibility for and appropriate amount of care and support.

Currently Ontario Community Care Access Centres (CCAC) capture client utilization data and costs of direct home-care services received by each client, however there is limited of client utilization of CCAC care coordination resources. Meanwhile, care coordination costs approximate 20% of total CCAC provincial funding. In the absence of measuring care coordination resource use by client, CCAC care coordination costs must be allocated to home care clients using a methodology which approximates the actual client use of care coordination resources.

B. Objectives

The purpose of this project is to analyze care coordination services and make recommendations on the most appropriate methodologies for the allocation of CCAC care coordination costs to home care clients for the analysis of costs of publicly funded home care in Ontario. Costing methodologies that are too simplistic risk misaligning financial incentives with best care practice, and costing methodologies that are overly complex risk failing a cost-benefit return.

C. Methods

The project began with a review of currently available cost and client utilization data. Six costing methodologies were proposed and a process for testing face-validity began with key informant interviews. Empirical testing did not proceed as originally planned due to difficulties in sharing client-level data outside of the Ontario Association of CCACs (OACCAC) and therefore is not part of this report. What follows is an overview of client costing, a discussion on data and proposed methodologies, interview findings, and conclusions and recommendations for next steps.

Who and What: CCAC Clients and Care Coordination

CCAC clients have access to a wide array of in-home services that are arranged for or paid for directly by the CCAC. Services paid for by CCAC range from professional nursing or therapeutic care (e.g. physiotherapy) to home-making services. Clients may also approach CCAC for access to other services such as Long-Term Care Home admission. Clients can be broadly divided into two major clusters – Service Recipient Clients (SRC), and non-service recipient clients. The latter may receive assessments for service and if deemed ineligible are then referred to other sources of community support including such programs as adult day programs, meals on wheels, transportation and similar services. The CCAC is not directly involved in the payment or arrangement of these services but rather provide information and make referrals for clients (information and referral or I&R clients). LTC placement clients may be either SRS or non-SRC clients depending on whether they receive home care services that are paid for by the CCAC. Among clients who do receive services

coordinated and paid for by CCAC there are several SRC types. Acute and rehabilitation clients are generally referred to CCAC services to assess and restore clients for short term episodes of care (generally between 15 and 60 days). The majority of the latter clients are referred to CCAC from acute care hospitals. The second largest group of clients are long-stay clients. This group receives services including professional and personal and homemaking support and accounts for the greatest proportion of CCAC spending. Other SRC groups include convalescent and end-of-life palliative care clients.

CCAC care coordinators comprise the majority of CCAC staff. These individuals are responsible for assessing the needs of clients, determining eligibility for CCAC-funded services and providing information and referral to other sources of care and support in the community. For service recipient clients, care coordinators are also responsible for ongoing oversight of the care plan, adjustments to services and periodic re-assessments. These activities involved extensive internal and external communications with primary care, home care service provider companies, and other community agencies.

1. Client-level Costing

When costs are captured at a global or aggregate level it is necessary to use a cost allocation methodology to estimate the costs at a disaggregated client or patient level. For Ontario CCACs, care coordination costs are captured at an aggregate level. Broadly speaking there are two cost allocation methods. The first method, which is typically referred to as the traditional method, or top-down approach, begins by identifying organizational level costs as direct and indirect. Direct costs are those that are related directly to a patient or patient category and indirect costs are those that cannot be uniquely identified to a patient or patient group. A second method is an activity-based, or bottom-up approach, which defines the activities in service delivery and assigns costs to patients based on individual patient utilization of health care services. The first approach is simplistic and results in an average cost per patient. The second approach is more resource intensive and calculates patient-specific costs. Both use a methodology to allocate indirect

organizational-level costs but differ in how costs are assigned to an individual patient. An application of activity-based costing is the use of Relative Value Units (RVU). Information on patient resource use is obtained from patient utilization and/or clinical diagnostic data to create relative values reflecting relative resource use. RVUs can be used with cost information to calculate a cost per RVU and therefore assign costs to each patient (the acute care Resource Intensity Weight or RIW is an example of an RVU approach).

The goal of any costing exercise is to accurately measure the patient's use of health care resources. When costs are gathered at an aggregate level it is necessary to employ a methodology that can attach costs to patients using measures of either activity use or resource use. Understanding the activities that comprise the majority of health resource consumption is essential. As such interviews were conducted with experts in the field to understand care coordination activities and home care client care coordination needs.

Current Data Sources

Two inputs are necessary in client-level costing: costs and client resource use measures. The following summarizes current care coordination costs and client utilization datasets.

1. CCAC Care Coordination Costs

Cost data is captured in financial accounting systems when a cost is incurred, and is typically identified by the originating source of the cost, i.e. department, and/or expense type, (e.g. salary expense). All Ontario health care organizations report under national reporting standards known as The MIS Guidelines. Provincial standards have been adapted from these national standards and in Ontario the reporting standards are known as Ontario Healthcare Reporting Standards (OHRS). CCAC care coordination costs are captured in OHRS by a functional centre designation and related expense account.

2. Client Utilization Data

Service utilization data is captured in the Home Care Database (HCD) (for fiscal year 2005/06 onward). Utilization data may provide two ways in which costs

could be apportioned to clients: by type of activity (assessment, service planning and coordination), or by service recipient type (acute/rehabilitation, long stay/maintenance, end of life, LTC placement, etc.). depending on the client utilization data available. Care coordination utilization data is recorded in the HCD primarily as a binary measure of the number of direct contacts that care coordinators have with clients that require at least 5 minutes of time but not generally the amount of time spent. Care coordinator activities for clients that do not directly involve clients are not recorded in the HCD and are generally not recorded under any specific guidelines by CCAC staff.

Proposed Costing Methodologies

As highlighted above, there is no rigourous tracking of the activities of care coordinators such as is available for the services provided to clients. Therefore the actual resource consumption of care coordination and related CCAC services for an individual CCAC client are not known. Two broad approaches to addressing this gap are: 1) to propose ways to use existing data to proxy or estimate relative care coordination resources of individual clients; or 2) to develop new data collection and improved tracking of care coordinator activity to specific clients. While the latter approach is recommended, as in an interim step, suggestions for the former are made here. Using available data sources, the following six approaches were proposed.

1. Average Cost Approach

A simple method to allocate care coordination costs is to allocate total care coordination costs equally among all home care clients, that is to divide total care coordination costs by a measure of patient volume. Current provincial reporting standards capture total care coordination costs and a count of the number of clients served during the equivalent time period. A cost per case can be calculated by dividing total care coordination costs by the number of individuals served, in effect allocating a fixed annual cost for care coordination. A rationale for using this approach is that the majority of care coordination time is spent on admission when assessing the client's needs, determining service eligibility and establishing a care plan for each client receiving home care services. It assumes that per-client costs are uniform through assessment, care planning and ongoing care management regardless of the

type of home care services that are coordinated and delivered regardless of SRC type.

2. Direct Service Approach

Another approach is to allocate care coordination costs to clients in proportion to the direct home care services received. A client's relative share of home care services can be measured by the dollar value of direct services received, number of distinct service types received, or hours of care. It assumes that the amount of resource required to organize and plan services is directly proportional to the amount of services received by clients. The approach would have to identify an alternate approach to address non-service recipients (e.g. information and referral and LTC placement clients) and those deemed ineligible for CCAC services.

3. Service Recipient Approach

This approach would first divide out the total amount of CC resources into separate pools for different SRC groups (e.g. short stay, long stay, end-of-life, etc.), A per unit cost for each SRC group can be calculated with various utilization measures from the OHRS and HCD datasets, i.e. number of direct care services, hours of care, etc., and costs accumulated for clients based on individual utilization. The assumptions here are similar to those for the Direct Service Approach but assumes that the aggregate costs may differ between different types of client groups. The approach requires determining what proportion of total CCAC resources are devoted to SRC versus non-SRC clients. With such a determination, this approach could address non- service recipients (e.g. LTC placement clients). For the latter clients, the initial assumption is that these clients would have equal resources (essentially the Average Cost Approach within this grouping) but other cost drivers could be developed. The challenge is determining what proportion of total CC resources are applicable to each SRC group.

4. Case-Mix Adjustment Approach

A case-mix algorithm has been developed for long-stay home care clients based on assessment data collected with the RAI-HC. This algorithm is referred to as the Resource Utilization Groups for Home Care (RUG-HC) developed by Dr. Jeff Poss and colleagues at the University of Waterloo. An assumption of this approach is

that CC costs are directly proportional to variation in costs associated with client functional status (i.e. activities of daily living) which is the primary driver for the RUG-HC algorithm. This is uncertain as CC costs were not included in the original validation of the RUG-HC algorithm. A challenge with this approach is that the algorithm has been validated only for long-stay clients and RAI-HC assessments are not completed for short-stay clients.

5. Activity-Based Costing Approach

An Activity-Based Costing (ABC) approach begins with defining the activities involved in providing care coordination services and assigning activity-based-costs to clients based on their utilization of care coordination activities. This approach will involve defining the activities of care coordination, allocating aggregate care coordination costs to activities, *and determine an appropriate cost driver* that can approximate client utilization of care coordination services. This approach requires new data collection that would allow staff time measurement attributable to individual clients.

6. Risk-based Approach

A further consideration could be to allocate care coordination costs for service recipients based on the risk for LTC placement using either the MAPLe (Method for Assigning Priority Levels) or the CCAC-developed RAI-aggregate/composite score that combines the MAPLe tool with other functional assessment tools available in the RAI-HC assessment. A similar challenge remains with finding an alternative approach for short-stay clients for whom RAI-HC data are not collected. This approach may not reflect current CC activity or current home care service intensity but rather assumes that CC activity should be allocated based on risk for LTC admission.

Planned Approach to Developing & Validating Costing Methodologies

Four steps were planned to evaluate the above proposed methodologies:

1. The approach undertaken in this analysis involved 11 interviews including 2 CCAC care coordinators (total=6) and their respective supervisor(s) (total=5) from 3 CCACs. Interviewees were asked open-ended questions about the activities undertaken by care coordinators for each client type, the amount of time taken for

each activity for each client type, and the key client and CCAC organizational factors that determine the amount of time for each activity. (e.g. do care coordinators specialize in either assessment or care planning or do they specialize in client types (placement, short stay, long-stay). The interview guide is included as Appendix A to this report. Table 1 was used for illustrative purposes during the interview. Second we presented the proposed approaches described above to allocating care coordination activity to clients for each client type and ask them to rate and comment on the appropriateness for each client type.

2. Based on the results of the interviews algorithms can be developed to ascribe care coordination costs to clients in each service type using cost drivers suggested by interviewees and feedback on the proposed approaches described above.

3. The empirical allocations of care coordination costs to individual clients and aggregate client groups by service type and/or activity can then be implemented using client-level HCD data. Differences in each allocation from the baseline (simplest form) suggested by approach 1 (an average care coordination cost per client) could then be compared to determine the variation observed from this baseline approach. Examining the distribution of costs by percentile to determine the variability within client groups according to each selected approach to allocating costs provides an assessment of the extent to which each algorithm varies by client group. The latter result could then be validated with CCAC staff (representatives such as those who contributed to interviews).

4. The result of the latter assessment would result in recommendations about the relative merits of each approach and make a final recommendation for which approach is most appropriate, under which circumstances.

Table 1: Proposed Care Coordination Resource Use Matrix by Client Type & Care Coordination Activity

Client group	Care Coordination Activities		
	Intake (Assessment/planning)	**Ongoing periodic (monthly)**	**Ongoing infrequent (Re-assessment)**
	Effort per client and drivers of cost	*Effort per client and drivers of cost*	*Effort per client and drivers of cost*
Information and Referral	"	"	"
LTC Placement			
Respite			
Convalescent			
Acute			
Rehabilitation			
Long Stay			
Maintenance			
Supportive Care			
End of Life			
…			
etc.			

D. Findings

Interview Purpose

Although a multi-step validation process as described above was planned, this section will focus on the interview findings and the implications to a costing methodology. The empirical test of the recommended approaches above was not completed as part of the present report. The goals of the interviews were to gain insight into the activities of care coordination, the factors that influence client use of care coordinating activities, and how client resource use could be measured or proxied with current data to allocate care coordination costs to individual clients.

Interviewees

Three CCACs participated: Erie St. Clair; Hamilton Niagara Haldimand Brant (HNHB); and Toronto Central (TOCCAC). These three were selected as they each had different approaches to defining different service lines for CCAC care coordinators. Eight care coordinators and five directors were interviewed from these CCACs. The care coordinators specialized in the following functions/client groups:

Functionally defined Care Coordinators:

Community

Access

Community Access Urgent

Care Hospital-based Care

Coordinator Resource Care

Coordinator

Specialized Client-care Coordinators:

Senior Enhanced

Care Short-Stay

Palliative

Interview Findings

1. CCAC Care Coordination Organizational Structure

To some extent all three CCACs have implemented a client care model and organized care coordination by client population. The Erie St. Clair CCAC is in the

midst of adopting the provincial Client Care Model, reorganizing care coordination into five broad population groups and subgroups. The TOCCAC and HNHB CCAC organized care coordinator in part by function then sub-divide community care into client populations. Appendix B highlights the care coordination structures of the three participating CCACs.

2. Care Coordination Activities

The purpose of the key informant interviews was to define the main care coordination activities and client type categories that would allow for the estimation of care coordination resource use by client or client population type. The care coordinators confirmed three main care coordinating activities: 1) **Intake**, 2) **Ongoing care coordination**, and 3) **Infrequent or episodic care coordination. Intake involves two distinct activities; initial assessment followed by a transition time of approximately 4-6 weeks in determining service plan and setting up services.** Care Coordinators noted that there are no 'typical' cases and care coordination needs varied significantly depending on many client factors and other factors. For instance, a language barrier can triple the amount of care coordinator time in completing an assessment and a client's cognitive ability can influence medication compliance and ability to get along with care providers influencing on-going care coordination time and episodic or infrequent care coordinator effort. Another factor influencing care coordination time in setting up services was the need to interact with community agencies not funded through the CCAC versus current contracted agencies. Appendix C highlights interview comments.

3. Client Population Groups

Clients are categorized into CCAC-unique population groups based on a number of individual factors, i.e. health conditions, support network, RAI score, etc. It is unclear if these categorizations are recorded in by CCACs in a common and systematic manner and if CCACs are using similar criteria for client categorization. The feedback from the interviews was that it would be problematic to use RAI scores and/or service recipient (SRC) codes alone to categorize clients into homogenous patient groups in terms of care coordination needs and resources and internally a number of factors

are used for assigning clients into care coordinating areas. One CCAC noted the completion of a client scorecard for the evaluation of a client population type assignment. It is unclear if that information is captured within the common CCAC data systems (Client Health and Related Information System - CHRIS) and if there would be comparative information across CCACs.

4. Use of Team Assistants/Service Assistants

All three CCACs make use of team assistants or service assistants. The role and use of assistants varies among CCACs and this variation may impact the comparability of costs between CCACs.

5. Resource Use Measures

The interviews confirmed inconsistent reporting of direct workload measures. Some care coordinators captured workload information but reporting was not mandatory. In the absence of and/or inconsistent reporting of workload data to measure relative resource use by clients, care coordinators were asked what information currently being captured could approximate care coordinator resource use or client complexity.

To proxy care coordination time for intake, care coordinators proposed using a measure of the intensity of services, since the more complex the client's needs the more service needs the client would need. To proxy for care planning and set-up, care coordinators suggested the number of services since setting up services for each client is more resource intensive than the intensity of care or hours of care. Episodic care needs may be evident from an increase in notes and tasks triggered from notes, an increase in nursing frequency, home making services, or overall increase in the number of caregivers and services involved in client care. A high MAPLe score could also be evidence of a crisis.

6. Care Coordinator Caseload

The interviews suggest variation in coordinator caseloads. Caseload standards and monitoring are in place at two CCACs however it was noted that these standards were often set based on historical practice and it is unclear if they are best practice or reasonable. Often caseload assignment is based on geographical considerations.

One CCAC acknowledged that their caseloads were currently 'too high' and work was under way to make adjustments. The amount of overtime worked by care coordinators varied, from a minimal or nil amount to an average of 10 hours a week (one CCAC noted that they had an extended hours team that provided overlap between teams so this eliminated the need for overtime). Often this was time needed to document after face-to-face client coordination visits and often this is unpaid overtime. There are two implications for costing, the first being that there is underreported care coordination compensation and workload, and second that caseload differences need to be accounted for when creating a resource based cost allocation.

7. Care Coordination Functional Centre Costs

There may be variations in the OHRS/MIS data that may impact comparability between CCACs. It is unclear if some CCACs may be using a separate functional centre to capture Information & Referral costs, if there may be a different classification of staff between Management & Operational Support and Unit Producing Personnel (which may or may not impact cost allocations), and one CCAC reported some medical compensation for a nurse practitioner in care coordination costs.

8. Gaps in Workload Reporting

The care coordinators noted a number direct client care coordinating activities not currently counted/captured:

- Calls with family physician
- Rounds
- Home visits with physicians
- Interdisciplinary contacts with home care delivery service providers and with other CCAC staff
- Calls less than 5 minutes
- Length of time in completing LTC applications/placements

In addition, non-client time is not reported:

- Responding to emails
- Establishing community relationships/partnerships

E. Conclusions

There are two main recommendations arising from this report. The First is to empirically test the proposed allocation methods described in section F. and recommendations for future data capture.

Exploratory Empirical Testing

Proposed Costing Methodologies	Discussion
1. Average Cost Approach	This can be calculated with current data sources by using total CCAC care coordination costs divided by a count of clients, i.e. Number of clients served
2a. Direct Service Approach	This can be calculated with current data sources by assigning total CCAC care coordination costs to clients in proportion to the total dollar value of direct services received by each client
2b.Service Intensity Approach	This can be calculated with current data sources by assigning total CCAC care coordination costs to clients in proportion to their total care hours, total number of services, or total number of different services received
3. Service Recipient Approach	This methodology requires total CCAC costs to be allocated to different client population groups (service-recipients). In the absence of workload data, this approach needs a proxy measure to reflect care coordinating resource use by service recipient or client population group.
4. Case-Mix Adjustment Approach	This approach is a refinement of SR approach above and client utilization measures would reflect resource intensity, or case mix. Case mix data is available in RAI-HC, using RUG-HC, for long stay clients however this methodology also requires either a method of segregating the care coordination costs for long-stay clients (similar to SR Approach) and/or case mix data for all CCAC clients.
5. Activity Based Costing Approach	This approach requires defining key activities and either allocating costs to activities or measuring resource use for each activity with relative resource use measures. Client level costing is achieved by tracking activity by client either directly or indirectly via proxy measures reflecting resource use.
6. Risk-Based Approach	This approach is similar to the Case-Mix approach however uses risk measures on risk of LTC placement for long stay clients, and therefore has the same limitations as the Case-Mix approach, requiring a method to allocate costs to long stay clients and/or a method to assign risk measures to all other CCAC clients.

The results and recommendations from interviews suggests that optimally cost pools would be created for different SRC groups. Service recipients may not be exactly as those grouped by current service service recipients based on service recipient care coordination workload (as suggested by Table 1), instead Table 2 outlines the proposed grouping based on interview results.

Future Considerations for Care Coordination Data Reporting

Workload reporting included contacts with clients but are not specific to the intensity/duration of these contacts. The care coordinators noted a number direct client care coordinating activities not currently counted/captured through workload reporting including coordination with other CCAC staff and care providers outside of CCAC including support services and physicians. The duration of assessment time is also not recorded. These are substantive limitations to the current workload tracking systems that should be addressed. We strongly recommend that an effective workload tracking system be put in place to record time spent client care coordination activity. The reporting and tracking system should be passive as much as possible and required only limited direct reporting of staff time in a workload tracking system.

Table 2: Care Coordination Resource Use Matrix by Client Type & Care Coordination Activity – Cost Drivers

Client group	Care Coordination Activities & Recommended Cost Driver		
	Intake (Assessment/planning)	**Ongoing periodic (monthly)**	**Ongoing infrequent (Re-assessment)**
Short Stay	Intake assessment: RAI---CA assessment completed, intensity of services (dollar, number), language, cognition, family support, living arrangements Service plan/set up – number of different services , community/contracted services	Post hospital patients require more care coordination (1/2 day to 1 ½ days a week) compared to community referrals, as well as patient characteristics (language, cognition, family /paid support, living arrangements) than regular care that can be delivered through provider reports (15 minutes) Palliative dependent on how close to EOL	
Referral (no service)	Intake assessment – intensity of services (dollar, number), language, cognition, family support, living arrangements	n/a	n/a
Referral & Assessment (no service)	Intake assessment – intensity of services (dollar,number),language, cognition, family support, living arrangements	n/a	n/a
Long Stay – Complex Frail elderly	Intake assessment: intensity of services (dollar, number), language, cognition, family support, living arrangements Service plan/set up: number of different services, community/ contracted services		Reassessments take the same length of time as original assessment Depends on type of crisis (fall, hospitalization, ED visit, social crisis – care giver burnout, hospitalization, absence)

Client group	Care Coordination Activities & Recommended Cost Driver		
	Intake (Assessment/planning)	**Ongoing periodic (monthly)**	**Ongoing infrequent (Re-assessment)**
Long Stay – Non complex	Intake assessment: intensity of services (dollar, number), language, cognition, family support, living arrangements Service plan/set up: number of different services, community/ contracted services		Reassessments take the same length of time as original assessment Depends on type of crisis (fall, hospitalization, ED visit, social crisis – care giver burnout, hospitalization, absence)

Appendix A

Interview Guide Interview Questions for CCAC Directors/Senior Directors

CCAC organization

- How are your Care Coordinator staff organized? (prompt: how do their functions/activities vary … by function, by client, by client group)?
- How is client intake organized (prompt: into a team that organizes all client care vs intake team then passed to others etc). ?
- How is workload assigned and how are care coordinators assigned to clients?
- What activity/client type constitutes largest proportion of Care Coordination resource/time?
- What comes second, etc
- How and why does this vary for different care coordinators?

CCAC Client Profile

- Distribution of client type

CCAC budget

- What is the approximate breakdown of care coordination costs, i.e. compensation and other (travel, supplies, equipment etc)?
- Are there any recoveries of care coordination costs with referred in clients?

Statistical reporting of care coordination workload/datasets

- How do you track care coordination time / costs for each client?
- What other CCAC resources are incurred in managing clients ? Are these recorded in workload tracking system or CHRIS ?

Interview Questions for Care Coordinators

- What is your job title/position?
- Do you specialize in one group of clients or a specific role/function ?
- What are the main types of activities and responsibilities that you have relating to client care coordination (prompts: admission, assessment, eligibility decisions, initial set up of care plan, check-ins with clients, ongoing assessments, changes to care plans)?
- How can the types of clients you care for be linked to service recipient codes?
- How many hours per week do you usually work? Any overtime?
- How much of your work time is spent related to client coordination (incl. direct contact, coordinating, mtgs re: client care)?
- How much of your time is spent related to travel?
- How much of your time is related to non-client care (office admin., data, CCAC-related meetings)?

- How is your time recorded? what systems? Other workload recorded?

Care Coordinators who specialize by client type

- What client type do you coordinate care for?
- Which of these individuals are identified as CCAC clients (and tracked using CHRIS)?
- What are the main activities that you do for these clients and how much time do you spend across each main activity types (e.g. assessment, follow-up)?
- Why does time vary across different activities?
- What factors lead some clients to be more time-consuming than others?
- What is your caseload?
- How is your caseload determined?
- What is the volume of new and discharged clients in a month (or week)?

Care Coordinators who specialize by function

- What client types do you coordinate care for?
- Which of these individuals are identified as CCAC clients (and tracked using CHRIS)?
- What are the main activities that you do for these clients and how much time do you spend across each client types (e.g. long stay vs palliative)?
- Why does time vary across different clients?
- What factors lead some clients to be more time-consuming than others?
- What is your caseload for each client type/overall ?
- What is the volume of new and discharged clients per month (or week)?

Table: <show table to care coordinator>

- We hope to be able to understand care coordination time/cost/resource use by client type and activity
- Are there other factors that influence your time in care coordination beyond these factors?
- Does this table make sense?
- How might we measure resource use ?
- Could you complete the table and give us an idea of your relative time for each activity and client type?

Appendix B

CCAC Care Coordination Organization

Erie St. Clair CCAC

1. Complex
    a. Adult
    b. Senior
    c. Palliative
2. Chronic
    a. Adult
    b. Senior
    c. Palliative
3. Community Independence
    a. Supported Independence
    b. Stable at Risk
4. Short Stay
    a. Acute
    b. Oncology
    c. Rehabilitation
    d. Wound
5. Well

Hamilton Niagara Haldimand Brant CCAC

1. Access
    a. Community Access
    b. Hospital Access
2. Community
    a. Long Stay
    b. Short Stay
    c. Palliative
    d. Child
    e. Rehab
3. Placement/Wait List

Toronto Central CCAC

1. In-Hospital
2. In-Community
    1. Urban Health
    2. Palliative
    3. Senior Enhanced Care
    4. Community Independence
    5. Child/Family Health
        a. Complex
        b. School/Health
        c. Short Term needs
    6. Acute/Rehab (Short Stay)
    7. Adult Supportive
3. In-Office

Appendix C

Interview Comments On Client Resource Use Across Main Care Coordinating Activities

1. Intake (Assessment/planning)

Client intake and planning can be broken down into 2 phases, 1) initial assessment and 2) Transition time/setting up services.

2. Intake assessment
    a. Time Estimates:
        i. Intake for a frail elderly client could take 45 minutes to 3 ½ hours
        ii. A simple community referral could take 20 minutes
        iii. A palliative assessment can take a ½ hour to set up for assessment, then 45 minutes for a short visit, to 2 hours for a long visit
    b. Client Factors:
        i. Language barriers and the need for an interpreter can triple the amount of care coordinator time for assessment
        ii. Family/caregivers support – one care coordinator noted a 'good feel factor'
        iii. Medical complexity/stability
        iv. Cognition/dementia of client
        v. Living arrangements
    c. Other Factors:
        i. For some in-hospital care coordinators, if patient is from outside the LHIN, it can take additional time to obtain approvals before proceeding
        ii. Different LHINs use different assessment tools

3. Transition time/Setting up services – this can take up to 4 to 6 weeks post assessment –
    a. The biggest time commitment is inputting service goals, translating the information into a care plan.
    b. Time Estimates:
        i. It could take 45 minutes to get services set up
        ii. Setting up services with community agencies is more difficult than using contracted services (45 minutes to 1 hour, versus 10 minutes)
        iii. Reinstatements are easier
4. On-going Care Coordination:
    a. Care coordination ongoing care can vary from 15 minutes a week to 1-1 ½ hours a week depending on client characteristics
        i. Providing care coordination from provider reports
    b. For more complex patients like post-hospital patients, care coordination time can be ½ day a week to 1 ½ days a week
    c. Changing or just adding a service is not time consuming
    d. For a complex elderly group, about 30% of clients at any point could be considered stable receiving on-going care coordination.
    e. A palliative client on-going care needs will depend on how sick and how close to the end-of-life they are – typically every week there are two visits
    f. On-going care coordination is heavily influenced by family supports and paid supports
5. Infrequent/Episodic Care Coordination:
    a. Reassessments can take the same amount of time as an initial assessment
    b. Care coordinator time is influenced by type of crisis, i.e. a fall, hospital visit, ambulatory call, ED visit, social crisis (caregiver absences, partner hospitalization), etc.
    c. For an elderly client, a crisis can be a hospital visit, a LTC application, crisis with support system etc
    d. For a palliative client, a change in condition, care giver burn-out, or health incident can create a crisis that can take ½ day of care coordinator's time

Additional Comments:

A Resource care coordinator (referred to at another CCAC as a float) noted that often she is unfamiliar with the client and that can add to her time in coordinating care.

The TOCCAC monitored calls into their In-Office Centre. The average call took 4 minutes, with documenting averaging 10 minutes, ranging from 1-43 minutes, and follow-up calls taking on average 10 minutes and also ranging from 1-43 minutes. The shorter calls could be a provider call-in for an extra visit, the longer call could be a call-in from a spouse with dementia reporting their care-giving spouse has gone to the hospital.