

EVALUATING THE IMPACT OF *CONSENT & CAPACITY: EVERYDAY DECISION-MAKING*  
*IN LONG-TERM CARE* ON STAFF CRITICAL THINKING DISPOSITION

by

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Under the supervision of Dr. Manon Lemonde

**Abstract**

The ability to think critically is valuable in all aspects of life, but staff critical thinking (CT) is particularly valuable in the challenging long-term care (LTC) setting where there are numerous, complex factors at play. Innovative continuing education programs are essential to support the development of critical thinking in LTC staff. *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)*, is a short training course that addresses matters relevant to the LTC setting, and assists staff with the development of critical thinking disposition (CTD). This pilot study used a pre-test-post-test mixed methodology design to evaluate the impact of *C&C ED in LTC* on staff CTD. The California Critical Thinking Disposition Inventory (CCTDI) was used to measure CTD pre and post-*C&C ED in LTC*. The Repertory Grid Technique (RGT) was also used to triangulate the findings. There were 53 multidisciplinary staff participants from Lakeview Manor, a LTC facility in Beaverton, Ontario. The findings indicated that *C&C ED in LTC* may have had a positive impact on the development of CTD in LTC staff. This is important because strong CTD may help staff provide better quality care to residents in the challenging LTC environment and may help staff achieve greater job satisfaction. The CCTDI results showed a significant increase in the Openmindedness scale, mean CTD scores were predominantly in

the positive CTD qualitative category, Systematicity scores showed an increase in qualitative CTD category, and there was an increase in percentage of staff scoring in the positive and strong positive CTD categories after participating in *C&C ED in LTC* for five of the CCTDI scales. The quantitative and qualitative RGT results show some relationships with CTD and the components of *C&C ED in LTC*. Study strengths and limitations were discussed with suggestions for future directions.

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## **Glossary of Terms**

*Consent and Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* – The program in the current study that is being evaluated (Irwin & DiNardo, 2010).

Continuing Education – Education for staff or employees to use directly with their work (e.g. workshops, seminars, in-service, or training). Often continuing education is short in duration, is offered during paid work hours, and is highly specific and practical. Continuing education often uses principles of adult learning and takes into account previous education and job experience (Cruz, Pimenta & Lunney, 2009; Fronck et al., 2009).

Critical Thinking (CT) – Purposeful, self-regulatory judgement. CT consists of two components: CT cognitive skill and CT disposition (Facione, 1990).

Critical Thinking Strategy – Instructional methods to broaden and augment how learners or staff think in order to support the development of cognitive skills and make a change in dispositions. For example, questioning, small group activity, role-play and debate are critical thinking strategies (Simpson & Courtney, 2007).

Curriculum – All the courses of study offered at a university or school (Avis, 1986). Von Glasersfeld (2008) describes curriculum as what to teach and the sequence in which it should be taught.

Delphi Technique – A structured process for obtaining consensus through iterative survey questionnaires (Facione, 1990; Stolee et al., 2005).

Disposition – A disposition is a person’s frame of mind or way of reacting to people or situations (Avis, 1986).

Disposition for Critical Thinking – The critical spirit – a style, a set of attitudes that define a personal disposition to prize and to use critical thinking in one’s personal, professional and civic affairs (Facione, Facione, & Sanchez, 1994).

Health Care Aids – Also called Personal Support Workers, are front line workers who play a key role in private, group living and facility-based settings. They provide long-term care and support to patients and clients. Work responsibilities include daily intimate personal care, housekeeping duties, shopping and companionship. They have frequent, daily contact with patients and clients (Sullivan et al., 2006).

Ideal Critical Thinker – Is a person who is habitually inquisitive, well-informed, trustful of reason, open-minded in evaluation, honest in facing personal biases, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit (Facione, 1990).

Knowledge – The product of knowing; information or understanding acquired through experience; practical ability, or skill; deep and extensive learning (Avis, 1986). Knowledge is the commodity of education (von Glasersfeld, 2008). Knowledge “refers to conceptual structures that epistemic agents, given the range of present experience within their tradition of thought and language, consider viable” (von Glasersfeld, 1989, p. 124).

Person-Centred Care – A core concept in LTC settings that guides changes in care philosophy from a traditional biomedical model to a more humanistic approach. The goal of person-centred care is improved quality of life for elders and to make LTC settings more desirable places to live and work (Li & Porock, 2014).

Program Evaluation – The systematic gathering, analysis and reporting of data about a program to assist in decision-making. Evaluation responds to specific management decision-making needs and is all about: describing the intended program; documenting what was actually implemented; describing participant characteristics; and demonstrating the impact of the program (Porteous, Sheldrick & Stewart, 1997, p. 5).

Program – Any series of activities, supported by a group of resources, intended to achieve specific outcomes among particular target groups. A program can be very big, very small or anywhere in between. This includes projects, special initiatives, pilots, campaigns, clinical services, etc. (Porteous et al., 1997, p. 5).

Skill – Proficiency or technical ability in any art, science, etc. demonstrated by ease or expertness in performance or application (Avis, 1986). Von Glasersfeld (1989) refers to the acquisition of skills as patterns of action.

## Chapter 1: Introduction

### Background

Autumn 2010, the University of Ontario Institute of Technology (UOIT), Faculty of Health Sciences was approached by Lakeview Manor, a long-term care (LTC) facility in Durham Region, to evaluate *Consent and Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)*, recently developed education for all their LTC staff. A new graduate student (principal investigator) who had an interest in program evaluation, and who was also searching for a thesis research topic, agreed to work with Lakeview Manor and conduct a pilot research study to see if *C&C ED in LTC* has benefits for LTC staff.

As part of a course in program evaluation with the Faculty of Health Sciences, the principal investigator (PI) completed the steps of the “Government of Canada model”, a program evaluation toolkit which provides a blueprint or a series of steps in order to complete a program evaluation (Porteous, Sheldrick & Stewart, 1997). By following these steps, the PI focused the evaluation, identified a potential methodology as well as data collection tools, described how to analyse results, and described how the findings may be used to help make decisions about the program. Although this work was preliminary and much refinement occurred in the months that followed, this blueprint led to the components of the current evaluation study.

After completing the course and the program evaluation blueprint, the PI began a search to pinpoint what to measure (dependent variable), how to measure it, and who to measure. Knowledge translation models were initially explored to guide the present study.

The PI then attended the *Annual NICE Knowledge Exchange 2011* (National Initiative for the Care of the Elderly) in Toronto to see if information from this conference could provide any further insights. Dr. Carole Estabrooks, RN, Professor and Canada Research Chair in Knowledge Translation, University of Alberta, was the keynote speaker. After the keynote presentation, during a short break in the proceedings, the PI lined up with others to speak to Dr. Estabrooks. With just a minute left to the break, the PI was able to speak to Dr. Estabrooks and quickly explain *C&C ED in LTC* and the PI's challenge. Dr. Estabrooks said that it sounds like the variable to measure may be staff critical thinking. She said that there are two types of critical thinking and there is a tool to measure each: The California Critical Thinking Skills Test and The California Critical Thinking Disposition Inventory.

At the same time that the PI was searching for the dependent variable and the method to measure the dependent variable, the research design was being developed and refined. Initially, the research design included measuring staff and residents at Lakeview Manor (experimental group to participate in *C&C ED in LTC*), and staff and residents at another Durham Region LTC facility, Hillsdale Estate (control group with no participation in *C&C ED in LTC*) pre and post-*C&C ED in LTC*. The research design also included measuring both critical thinking skills and critical thinking dispositions. However, after considerable review, the research design was narrowed down to include only staff at Lakeview Manor and only measuring critical thinking dispositions. After determining what to measure, how to measure and who to measure, the final research question was formed: what is the impact of *Consent and Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* on staff critical thinking disposition?

The ability to think critically is valuable in all aspects of life, but staff critical thinking (CT) is particularly valuable in the challenging LTC setting where there are numerous, complex factors at play including staff characteristics and beliefs, institutional parameters, and resident attributes (Canadian Institute for Health Information (CIHI), 2011; Fronek et al., 2009; Shreve-Neiger, Houston, Christensen, & Kier, 2008; Whitler, 1996). Innovative continuing education programs are essential to support the development of critical thinking in LTC staff (Bob, 2009; Cruz et al., 2009; Forneris & Peden-McAlpine, 2007; Simpson & Courtney, 2007; Smith-Blair & Neighbors, 2000).

The Delphi Report defines CT as a “purposeful, self-regulatory judgement” and the description of the ideal critical thinker is cited below:

The ideal critical thinker is habitually inquisitive, well-informed, trustful of reason, open-minded, flexible, fair-minded in evaluation, honest in facing personal biases, prudent in making judgements, willing to reconsider, clear about issues, orderly in complex matters, diligent in seeking relevant information, reasonable in the selection of criteria, focused in inquiry, and persistent in seeking results which are as precise as the subject and the circumstances of inquiry permit” (Facione, 1990, p. 3).

The above citations provide a definition of CT and describe the critical spirit – a style, a set of attitudes or character tendencies that define a personal disposition to value and use CT. It is important to note that this is an ideal and the description offers qualities to strive for. It is unrealistic to assume that most individuals can achieve this ideal and perhaps what is more realistic is to think of the development of CT as a continuum rather than the severe presence or

absence of CT. Furthermore, CT consists of two interrelated components: CT disposition (CTD) and CT cognitive skills. Educating good critical thinkers is more than just developing CT skills or thinking applications; it also includes nurturing the disposition toward CT, or encouraging the disposition to value and use CT to impel individuals to achieve mastery over CT skills, and be motivated to close the gap between what is valued and what is attained (Facione, Facione, & Sanchez, 1994). It is pointless to encourage someone to use CT skills when they will not use this skill because they do not value it as important. Not all of the previous research has separated CT into the two components, rather some studies (Forneris & Peden-McAlpine, 2007; Lamont, Brunero, & Russell, 2010; Raterink, 2008, 2011) are based on a broader conception of CT (e.g. there is no identification or differentiation between the two components). Other studies (Simpson & Courtney, 2007) do differentiate between the two components, however strangely both components are referred to as skills when clearly there is the CT cognitive skill and the CT disposition (an attitudinal concept rather than a skill). Particularly in the LTC setting, CTD is required to help staff find an effective balance between assisting and empowering residents so that they are able to maintain their personal freedom and self-determination in a LTC environment (Fronck et al., 2009).

The above information provides some background to the pilot study, introduces the research question, describes the ideal critical thinker, and includes a discussion of the two components of CT. The remainder of this chapter provides more information about the CT context and specific circumstances surrounding the current study. An effective way to introduce a topic and provide context is to utilize the five steps of the policy analysis process (Howlett & Ramesh, 2003). An applied problem-solving model, the policy analysis process uses

the following steps: agenda-setting (problem recognition), policy formulation (reviewing solutions), decision-making (choosing the solution), policy implementation (putting the solution into effect), and policy evaluation (monitoring results) (Howlett & Ramesh, 2003).

### **Agenda-setting**

The first step of the policy analysis process is agenda-setting or identification of a problem that needs to be addressed. As identified by staff at Lakeview Manor, a LTC facility in Beaverton, Ontario, LTC residents are dissatisfied with the quality of care they receive (e.g. resident complaints) and the bulk of suffering among residents is due to three main challenges: loneliness, helplessness, and boredom (Irwin & DiNardo, 2010; Li & Porock, 2014). LTC residents are typically adults in their later years. According to the Canadian Institute for Health Information (CIHI, 2011), in Canadian LTC facilities, 42% of residents are older than age 85, and 78% are female. Although in recent decades, rates of institutionalization among seniors have declined (In 2006, only 1.4% of those between 65 and 74 and 12% of those 75 and older were institutionalized, whereas in 1981, rates were 3% and 17%, respectively.), the level of care has increased with residents receiving more intensive care than in the past. In more detail, residents are more likely to require extensive assistance with activities of daily living, such as bathing and toileting, and they are more likely to have moderate to severe cognitive impairment (CIHI, 2011; Li & Porock, 2014).

These resident characteristics result in heavy demands for LTC staff to deal with resident disorientation, frustration and anger. Comparing home care clients to LTC residents, seniors in LTC are more likely to have moderate to severe cognitive impairment (60% versus 14%). Also,

cognitive impairment affects 1 in 11 Canadians older than age 65, and this is expected to double by 2038, along with the increase in the senior's population. Further, 31% of residents show signs of possible depression, more than double the percentage of those receiving care at home (14%). Twenty-three percent of seniors living in residential care facilities who had been identified as having depression or anxiety had symptoms worsen over a three-month period (CIHI, 2011; Li & Porock, 2014).

Not surprisingly, people typically prefer to stay in their own homes for as long as possible; however, when there are changes to a person's functional and cognitive status as just described, moving into a LTC facility may be necessary. LTC facilities provide residential living to individuals who need help with the activities of daily living, access to 24-hour nursing care or supervision in a secure setting (Li & Porock, 2014; Ontario Ministry of Health and Long Term Care, 2012). Given the increase in the seniors' population, there is great demand for moving seniors into LTC facilities (Li & Porock, 2014). There are approximately 4,845 residential care facilities in Canada, comprising almost 270,000 beds (CIHI, 2011). The consequence of the above mentioned LTC challenges, is that LTC staff need assistance with their everyday interactions with residents in order to indirectly help residents regain autonomy and self-determination during routine, daily decision-making (e.g. residents' ability to make a decision about getting a haircut or not, what clothing to wear, what food to eat, etc.) (Li & Porock, 2014). Based on the literature and observations in the field, it is recommended that staff develop higher order thinking skills, or critical thinking skills to be more aware of resident characteristics, institutional characteristics, as well as their own personal attributes and characteristics – all of which influence the care residents receive (Fronck et al., 2009; Irwin &

DiNardo, 2010; Li & Porock, 2014; Mullins & Hartley, 2002; Procter et al., 2014; Shreve-Neiger, et al., 2008).

Maintaining high quality of care for LTC residents is a challenge for staff (Li & Porock, 2014). One reason is the complexity of providing personal care for LTC residents when there are regular decisions that need to be made. A resident may be capable in respect to making some of these decisions and incapable of making others. Additionally, a resident may be incapable of making a decision at one time and capable at another (College of Nurses of Ontario (CNO), 2009). Another challenge is that staff are lacking in knowledge, training, and skill development of resident decision-making capacity (Li & Porock, 2014; Shreve-Neiger, et al., 2008). The Health Care Consent Act is Ontario legislation that deals with the capacity to make decisions in relation to specific treatment decisions, admission to care facilities or personal assistance services (CNO, 2009). The Substitute Decisions Act is Ontario legislation that deals with decision-making about personal care on behalf of an incapable person on a continuing basis (CNO, 2009). Staff need to fully understand these pieces of legislation in order to uphold residents' rights. Further, staff are challenged with how to respect resident autonomy while adhering to mandatory regulations and facility standards (Li & Porock, 2014; Mullins & Hartley, 2002). Residents have the right to have opinions, to make choices, and to take actions based on personal goals and values (Ganzini, Volicer, Nelson, Fox, & Derse, 2002). Lastly, there are other circumstances that help/hinder staff: teamwork, staffing support and patterns that allow for consistency in relationships with others, administrative support, volume of paperwork, working hours, and receiving excessive criticism (Procter et al., 2014; Raterink, 2008).

Groups that have an active interest in this issue include: different types of LTC staff, residents and their families, as well as facility administrators. Residents and their families are focused on the health and well-being of the residents living in LTC. In contrast, staff and facility administrators have other interests/issues as well, such as career development, workload, facility budget, rules and regulations. These groups also have associations whose goal is to support their issues/goals in a formal, structured way (e.g. College of Nurses of Ontario, Alzheimer's Society of Canada, Canadian Association of Retired Persons).

### **Policy Formulation**

The second step of the policy analysis process is policy formulation or the proposal of solutions. To improve the level of quality care that staff provide to residents, it is postulated that staff could benefit from training to learn how to think more critically during interactions with residents. The solutions include four different training options. A Contextual Learning Intervention (CLI) is a program where student/preceptor pairs work together. Through journaling, interviews, coaching, discussion groups, CT is incorporated into real life practice (Forneris & Peden-McAlpine, 2007). An Action Learning Set is a program where participants tackle real workplace problems in real time and meet in small facilitated learning groups called sets, which are held intermittently. During the group session a problem is presented and there is a discussion on how to take action to resolve it (Lamont, Brunero & Russell, 2010). In a mentoring program, a senior nurse, an expert in critical thinking, meets one-on-one with a novice nurse for a few minutes at the beginning of each shift. The senior nurse reviews situations that might potentially arise and situations which may require critical thinking (Bob, 2009). Lastly, rather than implementing a new program, an already existing course could be

supplemented with CT strategies such as questioning, debate, role play, and small group activities (Simpson & Courtney, 2007). The above four training options are based on real life practice and do indeed incorporate CT strategies, however some drawbacks include: training is not interdisciplinary, the training is targeted at a small number of participants, program length may be an issue (e.g. too long a period of time away from work duties), and a setting may lack in the needed human resources (e.g. no staff experts/preceptors).

Besides training staff to enhance their CTD, there are a few other possible solutions to improve the level of quality of care to residents. One solution is modifying the environment (processes, structures, routines) to be less institutional (Li & Porock, 2014). However, if all staff complete a CTD training program, this modification may potentially happen. Another solution is adding more support/services for residents with the goal of increasing satisfaction with their care, however this approach is not financially sustainable. A final solution to consider is building CT strategies into all staff training. This supplementation should occur regardless, however a CTD training program is needed to really expedite CTD development in the minds of staff initially and create a paradigm shift in their thinking.

**Decision-making: *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)***

The third step of the policy analysis process is decision-making or choosing the solution. The chosen solution was to develop and offer a training course for LTC staff (e.g. *C&C ED in LTC*). *C&C ED in LTC* (see Appendix A for the description) addresses matters relevant to the LTC setting, and assists staff with the development of CTD. *C&C ED in LTC* is a short course for staff

delivered in a presentation format (e.g. power point slides) by the program manager and also includes a toolkit resource (see Appendix B). *C&C ED in LTC* was developed for all LTC staff types (Registered Nurses, Registered Practical Nurses, Health Care Aids, Food Services, Recreation and Therapy, Environmental Services, Administration). The drawbacks of *C&C ED in LTC* are minimal. Staff time away from work is minimal (e.g. 1 hour only), how the program is offered is flexible (e.g. staff may complete the training independently by viewing the presentation in CD format at a time/place that is convenient or alternatively, participate in a group learning format), and the cost of *C&C ED in LTC* is minimal (toolkit materials, internal staff presenter/instructor). Further, there appears to be no other CTD intervention similar to *C&C ED in LTC* that is available for the unique needs of LTC staff.

Because of the unique nature of *C&C ED in LTC*, a brief discussion of learning theories will provide more background to the characteristics of this training and the relationship between staff learners and the presenter. It is hypothesized that the collaborative and interprofessional development and offering of *C&C ED in LTC* are in keeping with the constructivist learning perspective (Applefield, Huber, & Moallem, 2001; Chaiklin, 2003; Garmston & Wellman, 1994; Piaget, 1970; 1977; von Glasersfeld, 1989, 2008; Vygotsky, 1978). Although constructivist perspectives cannot be adequately described as having a completely uniform point of view, there is agreement around the concepts of learner and learning (Applefield, et al., 2001; Chaiklin, 2003; von Glasersfeld, 2008; Vygotsky, 1978). Constructivism places the learner, Lakeview Manor staff, at the centre and the staff learners actively construct knowledge (self-organization) rather than passively absorb it (von Glasersfeld, 1989, 2008). Constructivism is pragmatic and serves an adaptive function (von Glasersfeld, 1989). Instead of

assuming knowledge is a representation of what exists, knowledge is a mapping of what, in the light of human experience, turns out to be feasible (von Glasersfeld, 1989). *C&C ED in LTC* presenter's task is more than just providing data; but the presenter or facilitator helps staff learners create meaning from frameworks and activities (e.g. using real life examples and narrative to supplement already existing knowledge). Staff examine, question, and analyse experiences yielding knowledge (Applefield et al., 2001; Garmston & Wellman, 1994). There are four central characteristics believed to influence all constructivist learning: "1) learners construct their own learning; 2) the dependence of new learning on students' existing understanding; 3) the critical role of social interaction and; 4) the necessity of authentic learning tasks for meaningful learning," (Applefield et al., 2001, p. 8).

Three types of constructivism have been identified: exogenous constructivism, endogenous constructivism and social constructivism (Applefield et al., 2001; Moshman, 1982). With exogenous construction, there is an external reality that is reconstructed as knowledge is formed. Learners' mental structures develop to reflect the organization of the world and the environments that they are experiencing (Applefield et al., 2001; Moshman, 1982).

Endogenous constructivism or cognitive constructivism focuses on internal or individual constructions of knowledge. Derived from Piagetian theory, endogenous constructivism emphasizes individual knowledge construction which is stimulated by internal cognitive conflict as learners strive to reach cognitive equilibrium through the processes of assimilation and accommodation (Applefield et al., 2001; Piaget, 1970, 1977; Moshman, 1982; von Glasersfeld, 1989, 2008). Social constructivism views knowledge construction as being the social intersection of people, interactions that involve sharing, comparing and debating among

learners and mentors (Applefield et al., 2001; Moshman, 1982; von Glasersfeld, 1989; Vygotsky, 1978). *C&C ED in LTC* reflects social constructivism perspectives where LTC staff build knowledge together in a collaborative fashion.

Vygotsky's widely recognized idea, *Zone of Proximal Development* is an example of the social constructivist perspective (Applefield et al., 2001; Chaiklin, 2003; Vygotsky, 1978). The *Zone of Proximal Development* is "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). Chaiklin's (2003) more narrow conception of the *Zone of Proximal Development* is "an interaction on a task between a more competent person and a less competent person, such that the less competent person becomes independently proficient at what was initially a jointly accomplished task" (p. 41).

The concept, *Zone of Proximal Development*, can be discussed in greater detail by examining its smaller components and discussing how these components apply to *C&C ED in LTC*. Vygotsky (1978) explains that the "actual developmental level" is the level of development of a child's mental functions that has been established as a result of already completed developmental cycles. Chaiklin (2003) uses the term generality assumption as the actual development level and explains that a person can perform a certain number of tasks on their own, but in collaboration can perform more tasks. Prior to participating in *C&C ED in LTC*, staff learners were at their actual development level of CTD. "Potential development" is the level of development that has not yet matured but is in the process of maturation (Vygotsky, 1978).

Learning awakens a variety of internal development processes that are able to operate only when the learner is interacting with people in his or her environment and in cooperation with his or her peers (Vygotsky, 1978). The goal of *C&C ED in LTC* is for staff learners to reach the *Zone of Proximal Development* and demonstrate maturing CTD. Chaiklin (2003) uses the term potential assumption as the potential development level and explains that the focus is on the characteristics of the learner, such as the learner's potential and/or readiness to learn. This aspect may result in the easiest or most effortless form of learning possible (Chaiklin, 2003; Vygotsky, 1978). *C&C ED in LTC*, delivered in a collaborative fashion assists staff with furthering their CTD. Chaiklin (2003) includes an additional assumption called assistance assumption which emphasizes how a more competent person should interact with a less competent person (Chaiklin, 2003; Vygotsky, 1978). This could be a middle step between actual development level (generality assumption) and potential development (assumption). The more competent person directly and indirectly has a positive influence on the less competent person. Participant-to-participant interactions are as important as presenter-to-participant interactions (Chaiklin, 2003; Garmston & Wellman, 1994; Vygotsky, 1978).

*C&C ED in LTC* is a tool or resource to assist staff participants with furthering their knowledge development. In keeping with constructivist perspectives, for the current study terms such as "teach", "instruct", and "deliver" are avoided and replaced with "guide", "assist", and "offer" (von Glasersfeld, 1989, 2008). The terms "learn" or "knowledge development" is discussed as respectfully building on prior knowledge and experience (von Glasersfeld, 1989, 2008).

## **Policy Implementation:**

The fourth step of the policy analysis process is policy implementation or putting solutions into effect. Simpson and Courtney's (2007) conceptual model on the development and evaluation of CT is used as the conceptual model for this pilot research study. This conceptual model is described in detail in the next chapter. Simpson and Courtney (2007) developed their conceptual model to guide the development and evaluation of CT in Middle-Eastern nurses taking a course in which CT was not included in the curriculum (see Glossary). The present study uses this conceptual model to guide the evaluation of *C&C: ED in LTC* (that assists staff with the development of CTD) by examining its impact on staff CTD. The CT conceptual model (see Figure 2 in the next chapter), is divided into three components: dimensions, variables, and evaluation (or indicators of outcomes). Dimensions are the CT cognitive skills and dispositions, strategies of how to develop CT and criteria or standards needed to assess CT. For the present study, CT dispositions is the dependent variable, and *C&C: ED in LTC* is the independent variable and a CT strategy. These two dimensions are the area of focus for the present study. The variables are the components of each dimension. Cognitive skills (analysis, interpretation, inference, explanation, evaluation, and self-regulation) and dispositions (open-minded, inquisitive, truth-seeking, analytical, systematic, and self-confident in reasoning) are based on Facione's (1990) research. These dispositions are being measured in the present study. CT strategies include questioning, small group activity, role-play and debate. *C&C: ED in LTC* is a CT strategy, although it is not included in the conceptual model as it is new and not widely known. CT criteria include clarity, precision, relevance, depth, fairness, accuracy, logicalness and completeness. The final component of the conceptual model is the

evaluation of the conceptual model (e.g. the dimensions and variables). The conceptual model was evaluated through collecting information from the participants. Nurses were evaluated using observations, interviews, focus groups and evaluations were also based on nurses' ability to generate CT questions. In the present study, *C&C ED in LTC* was evaluated using information about participants' CTD collected using a CTD instrument (pre and post) and the Repertory Grid Technique (RGT) (focus groups). Using the Simpson and Courtney (2007) conceptual model as a guide, the current study used a pre-test-post-test mixed methodology design to evaluate the impact of *C&C ED in LTC* on staff CTD.

The findings of this pilot study are important for a number of reasons. If *C&C ED in LTC* is found to be effective at increasing staff CTD, *C&C ED in LTC* could be offered at other LTC facilities. Enhanced CTD may have an impact on resident quality of life as well as staff quality of work life (Li & Porock, 2014). In 2011, there were 1,878,325 Ontarians aged 65 years and older, representing 14.6% of the province's overall population. With the aging "boomers", the number of older Ontarians (65 years and older) is expected to double over the next two decades (Sinha, 2013). Although, rates of institutionalization among seniors has declined, the level of care required by residents living in LTC has increased (Li & Porock, 2014). Due to this concentration effect of residents requiring more intensive care, it is important to make continuous improvements within the LTC setting (Li & Porock, 2014). Lastly, the findings of this study will be used towards furthering the CT body of knowledge.

### **Policy Evaluation:**

The last remaining step is policy evaluation or the outcome of *C&C ED in LTC* (e.g. findings of the present study). The findings indicated that *C&C ED in LTC* may have had a positive impact on the development of CTD in LTC staff. In more detail, the results showed a significant increase in Openmindedness, the mean CTD scores were predominantly in the positive CTD qualitative category, Systematicity scores showed an increase in qualitative CTD category, and there was an increase in percentage of staff scoring in the positive and strong positive CTD categories after participating in *C&C ED in LTC* for Truth-seeking, Openmindedness, Systematicity, Confidence in Reasoning, and Maturity of Judgement. In addition to *C&C ED in LTC*, other factors show associations with CTD. There were significant correlations for years of LTC work experience (negative correlations), perceived relevance of *C&C ED in LTC* (positive correlations), highest level of education achieved (positive correlation) and purpose of *C&C ED in LTC* (positive correlation). The quantitative and qualitative Repertory Grid Technique (RGT) results show some relationships with CTD and the components of *C&C ED in LTC*.

### **Conclusion**

The literature review chapter (e.g. Chapter 2) that follows, positions this pilot research project within previously completed research, and identifies the research gaps already noted in the current chapter. Chapter 3 describes the methodology in detail for this research project. In Chapter 4, all the results are presented, and these results are discussed in Chapter 5, where they are linked to the findings of other research studies. Chapter 6 presents opportunities for future research and the conclusion.

## Chapter 2: Literature Review

This chapter is the literature review and includes information on the search strategy and selection criteria for the literature review, provides an overview of critical thinking disposition (CTD) research, discusses the evaluation of critical thinking (CT) programs and interventions, describes *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)*, examines CTD measurement tools, and the concluding section introduces CT conceptual models.

### Search Strategy and Selection Criteria

Based on the research question, what is the impact of *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* on staff CTD, a list of inclusion and exclusion criteria was developed. Included in the search were English language papers only, from the year 1990 to present day, and studies done all over the world (e.g. includes studies translated from other languages to English). The location was kept worldwide in order to retrieve as much CT and healthcare staff education literature as possible. Narrowing the search to countries with similar LTC systems as Canada would have eliminated many of the studies. Search engines used were *Cumulative Index to Nursing and Allied Health Literature (CINAHL)*, *Educational Resources Information Centre (ERIC)*, *Consumer Health Complete*, and *Medline*. The emphasis for this literature review was concepts such as CTD and staff educational programs. The setting, a LTC facility, is important, but secondary to the other two concepts. Keywords included in the search were critical thinking disposition, staff training, continuing education, long-term care, and program evaluation. Studies published in languages other than English, and studies published before 1990 were excluded. The literature review is grouped into four

themes: CTD research, evaluation of CTD programs/interventions, CTD measurement tools, and CT conceptual models.

### **Critical Thinking Disposition (CTD) Research**

In the 1980's, the critical thinking (CT) movement gained momentum as the decade progressed. By the end of the decade, the idea of building CT into education was endorsed by many. However, the concept of CT, its definition, how to teach CT, and how to assess it was obscure. In an attempt to bring clarity to some of this ambiguity, in the late 1980's, Facione (1990) completed a systematic inquiry into the current state of CT and CT assessment using the Delphi research process. As part of the Delphi research process, a panel of 46 scholars, educators and leading figures in CT theory and CT assessment research worked towards a consensus on the role of CT in educational assessment and instruction. As noted in the previous chapter, the Delphi research process determined that CT consists of two interrelated components: CT disposition (CTD) and CT cognitive skills. The current study focuses on CTD or the attitudinal component of CT. As not all the studies that follow differentiate between the two CT components, "CT" will refer to the overall or comprehensive CT. See the Glossary for definitions of these terms.

The Delphi research also came to the conclusion that CTD can be developed and improved in a person and it can be applied in all areas of life and learning. CTD requires domain specific knowledge in the circumstances in which they are applied (e.g. certain techniques, methods, context, etc.). Both CTD and the domain specific knowledge need to work together. The Delphi research also produced a list of the different attitudes or dispositions associated

with CT during general life circumstances (e.g. open-mindedness and valuing deeper thinking), as well as when problem solving and addressing a challenging issue (e.g. persistence and careful management of the details) (e.g. see Table 1). It is believed that *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* in the present study may support the development of these CT dispositions (CTD) in LTC staff (Facione, 1990).

Table 1

*Affective Dispositions of Critical Thinking* (Facione, 1990, p. 25)

Approaches to life and living in general	<p>Inquisitiveness with regard to a wide range of issues,                  Concern to become and remain generally well-informed,                  Alertness to opportunities to use CT,                  Trust in the processes of reasoned inquiry,                  Self-confidence in one's own ability to reason,                  Open-mindedness regarding divergent world views,                  Flexibility in considering alternatives and opinions,                  Understanding of the opinions of other people,                  Fair-mindedness in appraising reasoning,                  Honesty in facing one's own biases, prejudices, stereotypes, egocentric or sociocentric tendencies,                  Prudence in suspending, making or altering judgements,                  Willingness to reconsider and revise views where honest reflection suggests that change is warranted.</p>
Approaches to specific issues, questions or problems	<p>Clarity in stating the question or concern,                  Orderliness in working with complexity,                  Diligence in seeking relevant information,                  Reasonableness in selecting and applying criteria,                  Care in focusing attention on the concern at hand,                  Persistence though difficulties are encountered,                  Precision to the degree permitted by subject and circumstances.</p>

This landmark study, led to the development of CTD measurement instruments (e.g. California Critical Thinking Disposition Inventory, CCTDI) and CT conceptual models (e.g. Colucciello, 1997; Simpson & Courtney, 2007). CT measurement instruments and conceptual models are discussed in detail later on in this chapter. However, as the literature that follows uses the CCTDI, an initial cursory description is warranted. Following the Delphi research (Facione, 1990), some researchers started examining CTD in their work using the California Critical Thinking Disposition Inventory (CCTDI) as an instrument to measure the CTD variable. The CCTDI, the instrument used in the present study, is a 75 item attitudinal survey with seven sub-scales, each a measure of a CT habit of mind. The review that follows is predominantly focused on measuring CTD in novice nurses or nursing students and the CTD data is analysed at the group level not at the individual level. In the literature review, not only the results are discussed, but participant characteristics, research design and methodology are also described as these components all identify the gaps in the literature.

One exception to the analysis of CTD at the group level is a study by Smith-Blair and Neighbors' (2000) where 65 registered nurses from five hospitals were measured for individual CTD using the CCTDI during their first week of critical care orientation. Forty-three participants completed voluntary demographic information sheets at the time of entry into the study. The results of the study indicate that profiling individuals' disposition scores may be useful to education program directors to individualize orientation programs and strengthen deficiencies and nurture the nurses' CT disposition.

The next few studies utilize the CCTDI at the group level to discuss the findings of novice health care professionals (e.g. registered nurses or physical therapists) or students. CTD scores

varied in these studies depending on the study design. Bartlett and Cox (2002) did a study to determine change in CT dispositions among physical therapy students over academic and clinical portions of a year and to determine correlates of change in CT abilities. CTD scores were shown to increase over time in the same participants. Suliman and Halabi (2006) and Wangensteen, Johansson, Bjorkstrom, and Nordstrom (2010) both used a cross-sectional research design to pursue their research. Suliman and Halabi (2006) examined CTD in first year and fourth year baccalaureate nursing students and only found a significant difference for Confidence in Reasoning scores (4<sup>th</sup> year students with significantly higher scores) and participants scored in the positive qualitative category for most of the scales, whereas Wangensteen et al. (2010) measured CTD in newly graduated registered nurses and found most nurses had positive CTD and higher scores may be related to age, education and working in community health care. Ozturk, Muslu, and Dicle (2008) compared nursing students in one of two programs: problem-based learning program or traditional program and found students in the problem-based program had higher CTD scores for Open-mindedness and Truth-seeking.

In the Bartlett and Cox (2002) study, 28 middle-year physical therapy students completed the CCTDI before the academic year, after the academic year, and after their clinical placements. Statistically significant improvements in all CCTDI subscales and total score were obtained over the year. In more detail, the greatest significance on the CCTDI was observed for Truth-seeking ( $p < 0.001$ ) and Confidence in Reasoning ( $p < 0.001$ ). In the Suliman and Halabi (2006) study, there were more participants: 165 nursing students (105 beginning students, 60 graduating students). The results were slightly less optimistic than the findings from the Bartlett and Cox (2002) study. Although Analyticity, Open-mindedness, Systematicity,

Inquisitiveness, and Truth-seeking were the predominant CTD's, there were no significant differences between the two groups (beginning students and graduating students) for these scales. The scores on these five scales fell within the positive qualitative interpretation category, whereas the scores on Confidence in Reasoning and Maturity of Judgement fell within the Inconsistent/Ambivalent qualitative interpretation category. The two groups were significantly weaker for Confidence in Reasoning ( $t = -2.053$ ,  $df = 136.904$ ,  $p = .042$ ) with beginning students reporting poorer levels (Suliman & Halabi, 2006). The implications of these findings are that although participants scored in the positive qualitative category for most of the scales, the findings suggest that their academic experience may not have assisted in further development of CTD. Especially, for Confidence in Reasoning and Maturity of Judgement scales. It may be that the strategies of teaching and learning may not emphasize CTD in nursing students. However, the study design being cross-sectional (data from one moment in time) rather than longitudinal (data collected over a period of time) with pre and post assessment of each level of education, does not adequately assess CTD as an outcome measure (Suliman & Halabi, 2006). Monitoring change in CTD over time is needed.

Wangensteen et al. (2010) study had a much larger sample of participants compared to the previous two studies. Wangenstein et al. (2010), examined CTD among 618 newly graduated registered nurses in Norway; they also investigated whether background data (e.g. age, education achieved, type of setting) had an impact on CTD. Nearly 80% of the respondents reported a positive disposition towards critical thinking. The highest mean score was on the Inquisitiveness subscale and the lowest on the Truth-seeking subscale. Although Bartlett and Cox (2002) found no significant correlations for CTD and socioeconomic data, it is interesting to

note that Wangensteen et al. (2010) found that a statistically significant higher proportion of registered nurses with high CTD scores were found among those older than 30 years, those with university education prior to nursing education, and those working in community health care. Wangensteen et al. (2010) concluded that nurse leaders and teachers need to encourage and nurture CTD among newly graduated nurses and nursing students. The low Truth-seeking scores may be a result of the teaching strategies used and there might be a need to use alternate strategies that encourage CTD.

Ozturk, Muslu, and Dicle (2008) completed a study comparing CTD of 147 senior nursing students in two undergraduate nursing educational programs, one following a problem-based learning (PBL) model and the other a traditional model. In the traditional model, education is primarily provided in a lecture format that is noninteractive and relies on memorized knowledge, whereas the problem-based learning model, education is primarily based on problems from real-life situations. Students learn in small-groups rather than the classroom setting, and the learning involves discussion and application of what is learned. The intent of PBL is to develop problem-solving and CT skills. The two groups were comparable on all demographic variables. A significant difference was found among overall CTD scores, as well as two subscales, Open-mindedness and Truth-seeking, with the students in the PBL model having the higher CTD scores. According to Ozturk et al. (2008), these findings suggest that the active and self-directed nature of PBL encourages students' ability to develop CTD. The PBL model is congruent with the constructivist perspective of learning and the findings of Ozturk et al. (2008) demonstrate the benefit of constructivist learning and use of CT strategies in the Simpson &

Courtney (2007) conceptual model. Health care leaders and educators should consider incorporating PBL into educational programming.

The previously discussed studies examined CTD in health care professionals with little experience (e.g. students or recently graduated registered nurses). Measuring CTD using the CCTDI is helpful in providing individual CTD profiles (Smith-Blair & Neighbors, 2000). At the aggregate level, CTD scores varied in these studies. Bartlett & Cox (2002) study showed that CTD can be nurtured over a period of time in the same participants. When comparing different participants (e.g. 1<sup>st</sup> year nursing students to 4<sup>th</sup> year nursing students), there was only a significant difference for Confidence in Reasoning, with both groups scoring in the ambivalent category, but the 4<sup>th</sup> year students scoring significantly higher (Suliman & Halabi, 2006). Finally, it was found that there may be a relationship between CTD and age, CTD and work experience and that baccalaureate problem-based learning is needed to further support CTD development as traditional baccalaureate education alone is not enough (to support CTD development) (Ozturk, Muslu, & Dicle, 2008; Wangenstein et al., 2010).

Previous research focused on inexperienced registered nurses/physical therapy staff, and CTD development in relation to their education (e.g. hospital critical care orientation, physical therapy education, baccalaureate nursing education). Raterink's (2008 and 2011) research did not directly measure CTD in registered nurses; rather the author identifies enhancers and barriers to CTD in the workplace. These studies have a slightly different perspective on CTD from the previously discussed studies. Raterink's (2008 and 2011) research

identifies workplace characteristics that also play a role with registered nurses' ability to use CTD and the onus for using CTD is not completely linked to the registered nurse alone.

Raterink (2008) used a descriptive study to evaluate LTC registered nurses' reported definition of general CT and to identify their enhancers and barriers to using CTD in the care of their patients. The eleven registered nurses volunteered to participate in focus groups at three LTC facilities in a major metropolitan area. The registered nurses indicated that they learned about CT (general) during their education, they indicated it provided them with a guideline for clinical judgement, and it enhanced their confidence and open-mindedness. CTD enhancers included teamwork, staffing support and patterns that allowed for consistency in relationships with others, administrative support, and the last enhancer they stated was that the variety and acuity of the patient population gave them opportunity to practice their skills. CTD barriers included too much paperwork, lack of teamwork, feeling overworked, working overtime, and the last general CT barrier the registered nurses stated was receiving excessive criticism from others (Raterink, 2008). This study found that registered nurses, from their education, have an understanding of the concept of general CT, but the more reflective, dynamic general CT is lacking and it appears these skills may be acquired through experience (Raterink, 2008). Additionally, the study found that the work environment and staffing issues are seen as both CTD enhancers and CTD barriers and these characteristics can constrain or motivate nurses (Raterink, 2008). This information can be used to guide nursing administration at LTC facilities and assist in directing the development of a positive organizational structure and culture (Raterink, 2008). Raterink's (2008) findings are consistent with some of the CTD research (e.g.

Suliman & Halabi, 2006; Wangensteen et al., 2010) and inconsistent with others (Bartlett & Cox, 2002; Ozturk, Muslu, & Dicle, 2008).

Building on her research in 2008, Raterink (2011) did a study evaluating CT in practice. Using the Casey-Fink Survey, she asked eleven LTC registered nurses to evaluate work-related factors that enhance or pose barriers to the use of CTD in practice. Raterink's research (2008; 2011) using different methods of data collection (e.g. focus groups for 2008 study and the Casey-Fink Survey for 2011 study), identified the same work characteristics that enhance or act as a barrier to using general CT.

Raterink's research (2008; 2011) demonstrates that while there are workplace barriers to using CTD, registered nurses can alleviate these barriers with time and experience. Additionally, staff development educators and nursing administration can support registered nurses by working towards removing these barriers. Raterink (2008) suggests that studies conducted with a qualitative focus are more likely to demonstrate general CT than studies using quantitative, generalized assessment tools.

There are inconsistencies in the previous studies as to whether CTD can be developed from post-secondary or baccalaureate education versus experience in the workplace. Future research needs to move beyond CTD descriptive research in registered nurses (e.g. measuring CTD and related factors, or measuring CTD development in baccalaureate education) and use an evaluative approach to determine the impact of an educational intervention on CTD in a sample of multidisciplinary LTC staff. Enhancing CTD development is important for all types of staff and all levels of experience. Furthermore, future research needs to surpass the

identification of workplace barriers and use mixed methodologies to determine if there is an approach (e.g. educational intervention) to expedite the development of CTD in the LTC work setting. The Repertory Grid Technique (RGT) is an alternative methodology to the focus group method (e.g. Raterink's 2008). This unorthodox technique involves the study of a person's own theories or personal constructs through which the world is perceived and responded to (Feixas & Alvarez, 2000). This alternative technique evolved from George Kelly's Personal Construct Theory (PCT) and involves the plotting of constructs and elements on a grid. The RGT is ideal for the present evaluation study as pre and post concept comparisons can be made and participants own model of *C&C ED in LTC* can be examined.

### **Evaluating Critical Thinking Programs and Interventions**

The "Government of Canada model" (Porteous et al., 1997) provides a definition of program evaluation:

Program evaluation is the systematic gathering, analysis and reporting of data about a program to assist in decision-making. Evaluation responds to specific management decision-making needs and is all about: describing the intended program; documenting what was actually implemented; describing participant characteristics; and demonstrating the impact of the program. A program is any series of activities, supported by a group of resources, intended to achieve specific outcomes among particular target groups. A program can be very big, very small or anywhere in between. This includes projects, special initiatives, pilots, campaigns, clinical services, etc. (p. 5)

The current study is a program evaluation originally developed from the five steps of the “Government of Canada model” (Porteous et al., 1997). The literature review that follows discusses CT evaluative studies, identifies their research gaps and places the current study within the context of this collection of literature. Most of the studies that follow discuss the evaluations of programs/training courses in various healthcare settings using small participant samples, emphasize qualitative analysis, examine general CT rather than CTD, and find the programs to be beneficial to the development of general CT. The Carter (2008) study is one exception. Carter (2008) evaluated the CTD of nurses taking a formal online baccalaureate course as part of their continuing education. Cruz, Pimenta and Lunney (2009) and Fronck et al. (2009) studies evaluated short employer-initiated training courses for nurses or interdisciplinary staff and the courses were shown to be effective for general CT development.

The Carter (2008) study found no statistically significant increases in participants’ CTD as a function of online baccalaureate education. Post-registered nurses were the experimental group (taking an online course in the post-RN degree program) and two comparison groups were undergraduate nursing students (taking a semester-length, university-level, face-to-face course), and undergraduate sociology students (taking a semester-length, university-level, online sociology course). The CCTDI was administered before and after the course. Given that the cultivation of CTD is a desired educational goal and the findings indicated no significant increase in CTD after completing an online baccalaureate course, a greater understanding of online learning activities and assignments and their impact on CTD is required because strong CTD is an important outcome for registered nurses (Carter, 2008).

Also using a pre-test-post-test evaluation research design Cruz, Pimenta and Lunney's (2009) study found that registered nurses' diagnostic accuracy improved as a result of learning general CT skills in a 16 hour continuing education course. Cruz, Pimenta and Lunney (2009) performed a study to evaluate the impact of a continuing education course on general CT and clinical reasoning, on the accuracy of participants' diagnoses of human responses evident in written case studies. Two scenarios or cases were used to collect data for the pre-test and the post-test. For each scenario, the first part of the diagnosis was stated and the contributing factor was left blank. Using the newly acquired general CT skills, participants identified the contributing factor that was best supported by data in the scenario (Cruz et al., 2009). Given that the CT continuing education course seemed to have a positive impact on improving the nurses' diagnostic accuracy, CT continuing education may be important for nurse educators and leaders to consider.

This study contrasts with the findings of Carter (2008) where, the online course did not significantly increase participants' CTD compared to students taking a traditional course. However, Carter (2008) did find that all students showed an increase in truth-seeking as a result of their university courses. A key difference between the two studies is that Carter (2008) directly measured CTD using the CCTDI, whereas Cruz et al., (2009) measured and found improvement in diagnostic accuracy due to enhanced CT skills. Another key difference between the two studies is the type of education that was evaluated. Carter (2008) evaluated a formal university course, whereas Cruz et al. (2009) evaluated a short training course in the workplace. However, it is unclear if one type of education has a stronger influence on CT over another type of education as this was not the intent of the studies. Finally, Carter (2008) study

had a more complex research design using an experimental group and two comparison groups, whereas Cruz et al. (2009) study only had one experimental group.

Similar to Cruz et al. (2009), Fronck et al. (2009) evaluated a one-day CT training course delivered in a health care setting and found the course to be beneficial to interdisciplinary health care staff. The course was delivered to 109 participants at seven facilities in Australia and the study used a mixed methodology research design. Comparing (Fronck et al., 2009) to Cruz et al. (2009) study, both evaluative studies produced positive findings indicating the training benefited the participants. The findings of the Cruz et al. (2009) study indicated that nurses' diagnostic accuracy improved as a result of learning general CT skills in the course. The findings of Fronck et al. (2009) indicate that participants rated the course highly and they felt they gained helpful new CT. Although, it should be noted that Cruz et al. (2009) measured diagnostic accuracy rather than directly measuring CT. Fronck et al. (2009) measured participant perception or opinion of their CT development rather than directly measuring CTD or general CT. Therefore neither study directly measured CT. It is important to note that Fronck et al. (2009) study had a sample of interdisciplinary staff participants. No other study discussed in this chapter shares this important characteristic. The present study includes a sample of interdisciplinary staff participants.

Comparing (Fronck et al., 2009) to Carter (2008), the similarities and differences are very similar to the discussion above comparing Cruz et al. (2009) to Carter (2008). The findings of Fronck et al. (2009) indicate that the participants felt they gained helpful new CT. Whereas, Carter (2008) study the online course did not significantly increase participants' CTD compared

to students taking a traditional course. However, Carter (2008) did find that all students showed an increase in truth-seeking as a result of their university course. As noted previously, Fronck et al. (2009) measured participant opinion of their CT development rather than directly measuring CTD or general CT. Carter (2008) measured CTD using the CCTDI and evaluated a formal university course, whereas Fronck et al. (2009) evaluated a short training course in the workplace. The research design between the two studies is quite different in terms of rigour.

The remaining three studies evaluate general CT programs for small groups of registered nurses in the health care setting and found these programs to be beneficial to the development of general CT. Forneris and Peden-McAlpine (2007) study found that a contextual learning intervention (CLI) assisted in the development of general CT. Using a case study approach with six student/preceptor pairs the CLI was implemented during the first six months of their practice. The CLI included journaling, individual interviews, preceptor coaching, and leader facilitated discussion groups and these components incorporated general CT within real life practice through the use of narrative stories. It was found that the student nurses progressively developed general CT within the context of practice. This study demonstrates the value of learning interventions in the development of general CT.

Lamont, Brunero and Russell (2010) study found that an action learning set (ALS) was beneficial for engaging in general CT. An ALS is where participants tackle real workplace problems using general CT in real time and meet in small learning groups called sets, which are held intermittently over a fixed program cycle. The process involves supportive and collaborative learning and critical thinking, based on reflection, questioning, conjecture and

refutation; participants take action by making decisions and applying general CT between meetings to resolve problems. The set consisted of six registered nurse participants at the acute mental health unit, and a facilitator, the clinical nurse consultant from the unit. After six sessions, participants completed a participant opinion questionnaire to evaluate the ALS. Participants thought that all staff should participate in ALS's, they should be multidisciplinary and ongoing (Lamont et al., 2010).

Comparing the results of the Forneris and Peden-McAlpine's (2007) study to the results of the Lamont et al. (2010) study, both evaluation studies produced positive findings and showed the programs to be beneficial to the registered nurse participants. The Forneris and Peden-McAlpine's (2007) case study found that the CLI assisted in the development of general CT. The Lamont et al., (2010) study indicated that the ALS was important for registered nurses' to practice engaging in general CT. The programs evaluated in these two studies were similar. Although the topics of discussion likely varied based on context (e.g. setting, circumstances, participants, etc.,) the programs shared some common CT strategies. For example, small discussion groups with co-workers, a facilitator and an experienced preceptor coach or nurse consultant is a CT strategy used in both programs. The CT strategies of questioning and narrative were also incorporated in both programs. Both programs were six months in duration. The only difference was that the CLI had a one-on-one component with a novice registered nurse and a preceptor, and the CLI also included journaling. Finally, the two studies differed in methodology. The CLI was evaluated using a qualitative, observational, case study approach and the ALS was evaluated by collecting participants' opinion from completing a questionnaire.

Bob (2009) study found that the general CT training program improved new nurse's ability to increase the depth of general CT regarding patient care. In this program, a senior registered nurse, an expert in general CT, meets one-on-one with a novice registered nurse for a few minutes at the beginning of each shift. The senior staff member presented open-ended questions asking about the worst-case scenario, plans for patient education, plans for discharge, and how the nurses' assessment is documented in the care plan. Questions like these led the registered nurses to think more deeply about what they might encounter and what action should occur (Bob, 2009).

Comparing Bob (2009) to Lamont et al. (2010) and Forneris and Peden-McAlpine's (2007) studies, Bob's (2009) study also produced positive results in the evaluation of their small group programs. In general, for all three studies, registered nurse participants appear to endorse participating in these small groups, intermittent, discussion-based programs, over a period of a few months. The findings for all three studies also suggested improved general CT development. The Bob (2009) CT program similar to Forneris and Peden-McAlpine's (2007) CLI had novice registered nurse paired with an experienced registered nurse (preceptor) for one-on-one coaching sessions. All three programs incorporated similar CT strategies (refer to Simpson & Courtney's 2007 CT conceptual model), emphasized qualitative research design and did not use a standardized CTD measurement instrument. It appears, based on these positive findings, that small group or one-on-one programs are beneficial for staff in their development of general CT. However, the implementation of these programs in a setting where many staff require the training may be a logistical challenge. Finally, these three studies did not use the

evaluation pre-post design. Therefore, the ability for these studies to truly demonstrate change in CT as a result of the program by comparing CT before and after the program is unknown.

The previously described evaluative studies predominantly consisted of qualitative or mixed methodologies, research with small sample size and results demonstrating that the program/intervention was effective in the development of general CT and was endorsed by the participants. The only exception to this conclusion is the Fronek et al. (2009) study and the Carter (2008) study which both had large participant samples. The Carter (2008) study, the complex research design (e.g. experimental group and two comparison groups) resulted in no significant improvement in CTD after taking an online course. Therefore, this is the only study discussed where the program evaluated showed no improvement in CT or CTD. Half the papers discussed evaluated the program using a participant opinion approach (e.g. Bob, 2009; Fronek et al., 2009; Lamont et al., 2010), only two studies used the pre-test-post-test evaluative design (Carter, 2008; Cruz et al., 2009), and only Carter (2008) measured CTD rather than general CT. The participant opinion approach evaluates the program using a reductionist approach or examining the complexity of a program from the perspective of what is most important: the participants' opinion. Although high participant opinions are important, this approach does not truly measure the impact of the educational program on participants' CTD.

After synthesizing and describing these CT evaluative studies, the gap in the literature demonstrates the need to further investigate the development of CTD in the LTC setting (e.g. no studies were found to investigate CTD in the LTC setting), using a larger sample, and using multidisciplinary staff participants. The *C&C ED in LTC* is a short course, therefore staff will be

able to return to work duties promptly, a limitation found in other studies (Bob, 2009; Fronck et al., 2009). Further, the research design in the present study will collect more than just participant opinion on the program, it will measure a “pre and “post” change in CTD using mixed methodology.

### ***Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)***

*C&C ED in LTC* (see Appendix A) in the current study was a staff learning module called *Consent & Capacity: Everyday Decision-Making in Long-Term Care* (Irwin & DiNardo, 2010) and was intended for all Lakeview Manor staff. To describe the background behind the development of *C&C ED in LTC*, in 2009 and 2010, staff at Lakeview Manor participated in an interprofessional project sponsored by HealthForceOntario (an initiative involving the Ontario Ministry of Health and Long-Term Care and the Ontario Ministry of Training, Colleges and Universities). The Interprofessional Care/Education Fund (ICEF) 2007/08 and 2008/09 was a HealthForceOntario funding program that supported innovative health education or health care projects for interprofessional teams (HealthForceOntario, 2013). Lakeview Manor staff developed and submitted a project proposal highlighting consent and capacity in LTC as the issue of focus. The proposal was approved and the ICEF was awarded.

To start the project, an Interprofessional Review Group (IRG) was recruited from Lakeview Manor to meet to review and discuss consent and capacity practice in the LTC setting. A 2009 directive by Lakeview Manor’s management team was to increase understanding of consent and capacity practice at the LTC facility. The IRG was recruited from all staff disciplines at Lakeview Manor (e.g. Occupational Therapy, Physician, Nursing, Recreation, Therapy,

Environmental Services, Food Services, Dementia Network Partners, Psychogeriatric Consultant Partners, Social Service Workers, and Nurse Practitioner). The final IRG consisted of nine staff from Administration, Food Services, Recreation and Therapy, Environmental Services, and Nursing. The goal of the IRG was to identify the situations care providers need to apply consent and capacity concepts in order to provide person-centred care (Li & Porock, 2014) and uphold resident rights.

A series of meetings were held over a 5 month period where the group met and there was an expectation that some of the discussions held at these meetings would be shared with peers and collect their input (e.g. focus groups). IRG collaboration with their Lakeview Manor peers was an important component to this project. The ultimate goal of this project was to create an interprofessional, education tool for LTC service providers to use. *C&C ED in LTC* is a tool which assists LTC staff with enhancing their CTD during interactions with residents and indirectly help residents regain their sense of autonomy and self-determination during routine, daily decision-making. *C&C ED in LTC* was newly developed and had not yet been implemented in the work environment. Similar to Cruz, et al., (2009) and Fronek et al. (2009), the program was a training course offered to staff in presentation format (e.g. power point slides) by the program manager and included a toolkit resource (e.g. the CD-independent module, reflection questions, pocket reference tool and a certificate of participation). The program is meant to be adaptable (i.e. live in a group setting or for staff to view independently). The program consisted of 46 slides with added sound features and content was offered to staff by the presenter with frequent opportunities for questions and discussion. *C&C ED in LTC* was approximately 60 minutes in duration (varied slightly between sessions depending on amount of discussion). At

the end, staff received the toolkit, and completed the reflective questions (voluntary), which were not related to the research design. The reflective questions were developed before the research study was initiated and their main purpose was to be included in the independent learning module.

Following a philosophy of person-centred care (see Glossary), *C&C ED in LTC* presented information on consent and capacity and everyday decision-making, legal competency vs. decision-making capacity, strategies to assess capacity, and sensitivity training (e.g. respect for resident autonomy, self-awareness). *C&C ED in LTC* attempted to break down the complexity and confusion surrounding decision-making capacity, consent and how to assess decision-making capacity by providing strategies, steps, and content knowledge to assist staff with providing care for residents.

To explain in greater detail, *C&C ED in LTC* presented information to LTC staff on how to assess resident capacity to make everyday decisions. *C&C ED in LTC* encouraged staff to ask questions and listen to resident's answers (Irwin & DiNardo, 2010, slide 17 - 20). *C&C ED in LTC* guided staff towards the understanding that residents have the right to have their own opinions and wishes (Irwin & DiNardo, 2010, slide 10, slide 12, slide 25, slide 28 and slide 42) and encouraged staff to "think outside the box" (Irwin & DiNardo, 2010, slide 41). Also, the information on slide 43 encouraged staff learners to reflect on their own qualities and attributes and how it may impact their approach to care. Further, *C&C ED in LTC* encouraged staff learners to be "everyday healthcare hero's" (Irwin & DiNardo, 2010, slide 32), "listen to the red flags that go off in your tummy and do something about it" (Irwin & DiNardo, 2010, slide

42) and *C&C ED in LTC* taught staff learners a process to assess the decision-making capacity of residents (Irwin & DiNardo, 2010, slides 14-20), which was a process requiring CT skills. The underlying tone of *C&C ED in LTC* was positive, respectful and encouraged staff to confidently apply the strategies and techniques taught in the program. Staff was encouraged to keep well informed using a number of listed resources.

### **Critical Thinking Disposition Measurement Tools**

The measurement of CTD has been one of the most difficult aspects of CTD research. Measurement is defined as “the extent, dimensions, quantity, etc. of something, ascertained especially by comparison with a standard,” (Avis, 1986). The California Critical Thinking Disposition Inventory (CCTDI), is the measurement instrument used in the present study and several studies that used this instrument was discussed earlier in this chapter.

Besides the CCTDI, a number of other tools have been developed that have attempted to provide a solution to the challenge of measuring CTD (Edman, Bart, Robey, & Silverman, 2000). Brunt (2005) analyzed five commonly used CTD measurement tools; however, besides the CCTDI, only one other instrument (e.g. The California Critical Thinking Skills Test) separates CT into the two components or dimensions of the Simpson and Courtney conceptual model (2007) and the remaining tools are discussed as general CT measurement instruments. The tests included The Watson-Glaser Critical Thinking Appraisal (WGCTA), The California Critical Thinking Skills Test (CCTST), The Ennis-Weir Critical Thinking Essay Test, The Cornell Critical Thinking Test, and the CCTDI. The CCTDI and the WGCTA are the two most-used instruments (Wangensteen et al., 2010). Both are general measurement tools (e.g. not discipline specific),

and are reliable and valid (Brunt, 2005). An instrument developed from the Delphi study (Facione, 1990), the CCTDI requires the shortest amount of time for participants to complete (e.g. approximately 20 minutes) (Bartlett & Cox, 2002) compared to the other CT instruments, and is useful in the assessment and planning of specific curriculum development, as well as monitoring change to evaluate the effectiveness of a program (Brunt, 2005). A unique feature of the CCTDI is that it is rooted in the findings of the Delphi study, rather than a conceptual framework, as no CTD framework existed at that time. The CCTDI was elaborated from a long process of item development, factor analytic techniques to cluster constructs. Following this, the instrument was tested and found to be a psychometrically strong measure (see CCTDI validity and reliability information in the next chapter). For both the CCTDI and WGCTA, qualitative aspects may be missed when using these general, non-context specific tools (Brunt 2005). To address this, the current study also uses the Repertory Grid Technique during focus group interviews to provide additional data and triangulation.

The Ennis-Weir Critical Thinking Skills Test requires participants to compose an essay which results in an extremely time-consuming, laborious, and subjective scoring process and possible inconsistency with inter-rater reliability and scoring of the tool. Further, it is difficult to separate writing competence from CT (Adams, Whitlow, Stover, & Johnson, 1996). The California Critical Thinking Skills Test is also discipline neutral and similar to the CCTDI is based on the Delphi Report. The CCTST measures the cognitive skill dimension of CT whereas the CCTDI measures the attitudinal or dispositional dimension (Brunt, 2005). The Cornell Critical Thinking Test takes the longest amount of time to complete (e.g. 50 minutes) (Brunt, 2005),

criterion validity has not been established, and this instrument analyses a limited number of CT behaviours (Adams et al., 1996).

Edman et al., (2000) developed The Minnesota Test of Critical Thinking (MTCT) to measure both critical thinking (CT) skills and a key disposition of critical reasoning: the willingness to critically evaluate one's own goals and beliefs. Also based on the Delphi study (Facione, 1990), the MTCT presents scenarios followed by statements and the participants rate each statement based on their level of importance in making a judgement. As the MTCT emphasizes the measurement of CT rather than CTD, this tool was not selected for the present study.

The California Measure of Mental Motivation (CM3) (Giancarlo, Blohm, & Urdan, 2004) is a tool for measuring CTD in high school students. The CM3 measures 4 main dispositional aspects of CT: open-mindedness, self-regulation, a commitment to learning and mastery, and creative problem solving. The CM3 is a questionnaire with Likert-style questions. The participants in the present study are adult professionals; therefore the CCTDI is a more appropriate instrument to measure CTD.

The Motivation for Critical Reasoning in Online Discussions Inventory (MCRODI) (Zhang, Koehler, & Spataru, 2009) was developed, as indicated by the tool's name, to measure the motivation to engage in CT in online discussions (e.g. post ideas, thoughts, remarks, etc. as part of an online course). Adopting items from other questionnaires (Grant & Dweck's 2003 questionnaire, Theories of Intelligence Scale-Self Form for Adults), plus the addition of new items, the inventory addresses the following motivational concepts: goals, implicit theories,

self-efficacy perception, value and effort. Although motivation to think critically is an overarching concept of CTD, the MCRODI does not meet the goals of the present study. The CCTDI is used as a CTD measurement instrument in the present study as it provides a general measure of CT beliefs and dispositions as well as motivational aspects and is not customized solely for CT demonstrated in online discussions.

The present study will use the CCTDI as it measures elements found in *C&C ED in LTC* (e.g. open-mindedness, confidence, and analytical abilities), is in keeping with the Simpson and Courtney (2007) conceptual model, and this instrument will provide information to help answer the present study's research question. The inclusion of focus group interviews and the RGT in the present study research design will allow the capture of qualitative data and additional quantitative data to account for the non-context specific nature of the CCTDI.

### **Conceptual Models for Critical Thinking**

A conceptual model is important to guide a research study as it provides the underlying theory that the research is testing and shows the relationships between main components. Three conceptual models for CT were identified in the literature review. The first two conceptual models draw from Facione's (1990) Delphi research, discussed earlier in this chapter, and one of these, the Simpson and Courtney conceptual model (2007) (see Figure 2) is the conceptual model that supports the present study. These two Delphi conceptual models will be discussed first, followed by the third conceptual model, Carter (2008).

The Colucciello conceptual model (1997) shown below has three levels (dimensions, variables and indicators of outcomes). The dimensions include CTD, CT skills, CT elements, and

CT criteria. The variables are the actual components of each dimension. For example, CTD consists of seven variables (e.g. truth-seeking, open-mindedness, analyticity, systematicity, self-confidence, inquisitiveness, maturity). CT skills consists of five variables or skills (e.g. analysis, evaluation, inference, deductive reasoning, and inductive reasoning). The critical thinking elements consist of nine variables (e.g. purpose, question/problem, evidence, conceptualization, interpretation, assumptions, perspectives, implications, consequences). Finally, CT criteria consists of eight variables (e.g. clarity, precision, specificity, accuracy, relevance, depth, breadth, logical). The last level, indicators of outcomes, includes two of Facione's CT instruments, California Critical Thinking Disposition Inventory (CCTDI) (Facione & Facione, 2014) and California Critical Thinking Skills Test (CCTST) (Facione & Facione, 1994) , as well as the scientific process and professional nursing standards.

The conceptual model for the current study is the Simpson and Courtney conceptual model (2007) (Figure 2). The Simpson and Courtney conceptual model is used as it helps address the goals of the research. Although the Colucciello conceptual model includes the California Critical Thinking Disposition Inventory (CCTDI), the instrument utilized in the present study to measure critical thinking disposition, the Colucciello conceptual model was not chosen for the present study as it is narrow in perspective (e.g. focuses on learners only and not the instructor), and is for nurses only (not multi-disciplinary research). Please see Figure 1 below.

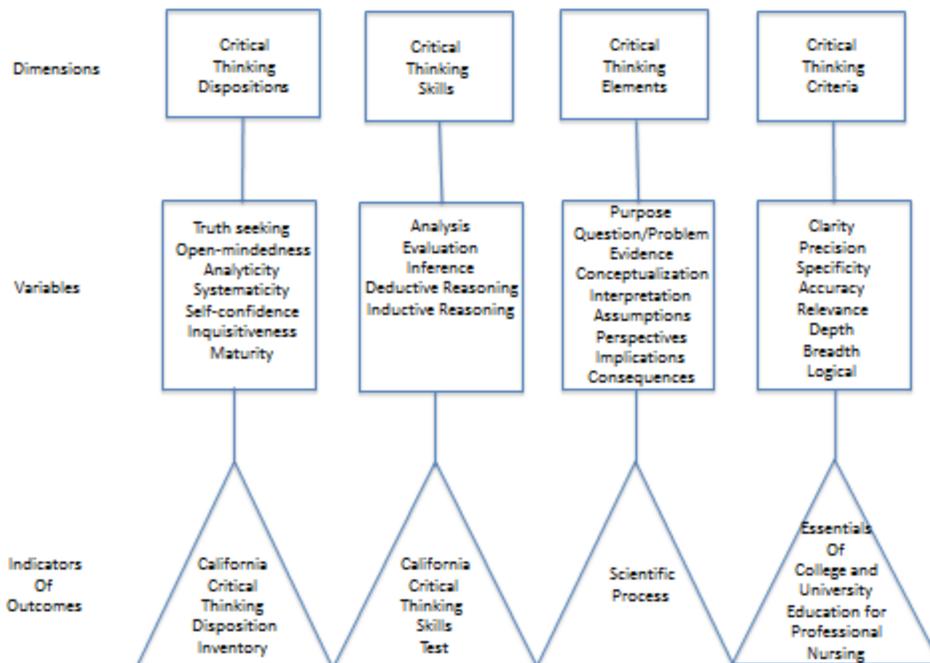


Figure 1. Conceptual model reflecting the dimensions of critical thinking (Colucciello, 1997).

The Simpson and Courtney conceptual model (2007) (Figure 2) is the conceptual model used in the present study and it includes elements from the Colucciello conceptual model (1997). Simpson and Courtney (2007) developed their conceptual model to guide the development and evaluation of CT in Middle-Eastern nurses taking a course in which CT was not included in the curriculum (see Glossary). The CT conceptual model (see Figure 2), similar to Colucciello conceptual model (1997), is divided into three components: dimensions, variables, and evaluation (or indicators of outcomes). Dimensions are the CT cognitive skills and dispositions, strategies of how to develop CT and criteria or standards needed to assess CT. It is unclear why both CT components are referred to as skills when clearly there is the CT cognitive skill and the CT disposition (an attitudinal concept rather than a skill). To reiterate from Chapter 1 (also see definitions in Glossary), CT cognitive skill is the thinking application,

cognitive technical ability or expertness in performance (Facione, 1990), whereas CT disposition is the critical spirit, set of attitudes, or character tendencies that define a personal disposition to value and use CT (Facione, Facione, & Sanchez, 1994).

The variables, like Colucciello's conceptual model (1997), are the components of each dimension. Cognitive skills and dispositions have essentially the same variables as Colucciello's conceptual model (1997) and are based on Facione's (1990) Delphi research. CT criteria are also very similar to Colucciello's conceptual model (e.g. clarity, precision, relevance, depth, fairness, accuracy, logicalness and completeness). CT strategies are different from Colucciello's conceptual model and includes questioning, small group activity, role-play and debate. The final component of the conceptual model is the evaluation of the conceptual model (e.g. the dimensions and variables). This final component is also different from the Colucciello conceptual model in which indicators of outcomes were used (CCTDI, CCTST, the scientific process, and professional nursing standards). The Simpson and Courtney conceptual model (2007) was evaluated through collecting information from the participants. Nurses were evaluated using observations by and interviews with the senior nurse educator to assess their level of participation; evaluations were also based on nurses' ability to generate CT questions and their participation in focus groups. The nurse educator was also evaluated using observation, interviews, providing feedback, participation in focus groups and lastly peer evaluation. The differences in these two conceptual models, CT strategies (Simpson & Courtney, 2007) versus critical thinking elements (Colucciello, 1997), and the methods of evaluation (Simpson & Courtney, 2007) versus indicators of outcomes (Colucciello, 1997), may exist because the two conceptual models have different purposes. The Simpson and Courtney

(2007) developed their conceptual model to guide the development and evaluation of CT in Middle-Eastern nurses taking a course in which CT was not included in the curriculum.

Whereas the Colucciello conceptual model developed ten years earlier, had a more fundamental purpose, which was to examine what CT is, and what the scores on the CT measurement instruments actually represent. The current study, which builds on the progress of CT research over a number of years, has an understanding of the concept of CT and the CCTDI instrument, and employs the Simpson and Courtney conceptual model (2007) to guide the evaluation of *C&C ED in LTC*.

<b>Critical Thinking (CT)</b>				
<b>Dimensions</b>	<b>Cognitive Skills</b>	<b>Disposition Skills</b>	<b>Strategies</b>	<b>Criteria</b>
<b>Variables</b>	Analysis	Open-minded	Questioning	Clarity
	Interpretation	Inquisitive	Small Group	Precision
	Inference	Truth-seeking	Role-play	Relevance
	Explanation	Analytical	Debate	Depth
	Evaluation	Systematic		Fairness
	Self-regulation	Self-confident		Accuracy
				Logicalness
				Completeness
<b>Evaluation</b>	<b>Nurse Educator</b>	<b>Students</b>		
	Observation	Observation		
	Interviews	Interviews		
	Feedback	Generate CT questions		
	Focus group	Focus group		
	Peers			

Figure 2. An adapted conceptual model to guide development and evaluation of critical thinking skills (Simpson & Courtney, 2007).

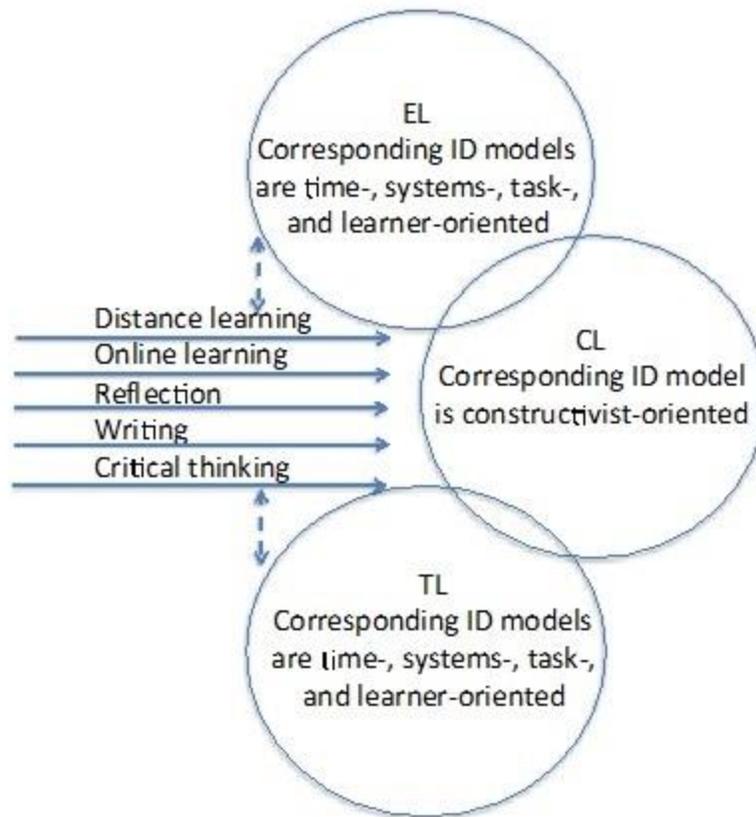
The Simpson and Courtney conceptual model (2007) (Figure 2) will be used to support the current study as the conceptual model will help address the goals of the research. In particular, *C&C ED in LTC* includes elements such as CTD development, the use of the CT strategies (e.g. questioning), and the evaluation of participants' CTD. This conceptual model does not include the CCTDI to evaluate CTD and only qualitative methods were included. The present study uses both the CCTDI and the RGT as a mixed methodology approach to evaluate staff participants' CTD.

Although this conceptual model was developed based on research using a sample of nurses from the Middle-East (e.g. possible cultural differences between Middle-Eastern LTC staff and Ontario LTC staff), the conceptual model was based on US CT research (e.g. Facione, 1990) that was discipline neutral (e.g. focused on CT rather than any particular professional group). Further, the Colucciello conceptual model (1997) that Simpson and Courtney conceptual model was adapted from, was a US based study of nursing students from Midwestern USA. Therefore, cultural differences between the population being studied in the current study (e.g. Ontario, Canada LTC staff) and the Simpson and Courtney (2007) study (e.g. Middle-Eastern nurses) will hopefully have minimal consequence.

Carter (2008) developed a CT conceptual model by blending three already existing learning theories: constructivism, transmissive and experiential learning. Although these three learning theories can be at opposition with each other or conflictual, Carter (2008) claims that because the course targeted by her study is not data-intense (e.g. aligning with transmissive learning), or focused on the development of specific hands-on skills (aligning with experiential learning), typical learning strategies based in transmissive and experiential learning theories can assist in knowledge construction. The conceptual model was developed to provide a guide for her study which evaluated an online nursing course by measuring change in CTD. Under social constructivism theory (CL as shown in Figure 3 below), knowledge is constructed through interaction with other students and the instructor in a collaborative and cooperative manner. For example, the nurse-learners were required to post their assignments and interact with each other and the instructor via a bulletin/discussion board to share ideas (CL) (Carter, 2008). The course also included transmissive practices and experiential practices: online lecture with

teacher-prepared notes (TL) and a family assessment learning activity which included the examination of case studies and the development of hands-on skills (EL) (Carter, 2008).

Constructivism is the predominant theory for this conceptual model; however, as shown below there is some learning via the other two learning theories. Including a mixture of theories is a result of best practices in instructional design (ID as shown in Figure 3) (Carter, 2008). Although the present study is also an evaluation of a course for adults and CTD is measured before and after the education is delivered, CT is not of central importance to this conceptual model and this conceptual model does not include the measurement of CT. Further, this conceptual model was customized for an online course. Therefore the Simpson and Courtney conceptual model (2007) will be used for the present study.



*Figure 3.* An inclusive constructivist theoretical framework developed from competing models and constructed variables. EL = experiential learning, CL = constructivist learning, TL = transmissive learning, ID = instructional design. Solid arrows represent "influence/impact on" and broken arrows represent "borrowing components from" (Carter, 2008).

## Conclusion

The literature review for the present pilot study was divided into the following themes: critical thinking disposition (CTD) research, evaluating critical thinking (CT) programs and interventions, *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)*, critical thinking disposition measurement tools, and conceptual models for critical thinking. The

findings of the studies under the CTD research theme are inconsistent regarding the impact of education, age, time and experience on CTD, and these studies tend to focus only on novice registered nurses (e.g. new professionals or students). To summarize the findings, CTD scores tend to be positive (Suliman & Halabi, 2006; Wangensteen et al., 2010), yet CTD appears to be lacking in staff (Raterink, 2008). CTD can be developed over time with baccalaureate education (Bartlett & Cox, 2002), and higher CTD may be related to age, education and working in community health care (Wangensteen et al., 2010), yet there is little difference in CTD between junior and senior baccalaureate students (Suliman & Halabi, 2006). Additionally, it was found that problem-based learning may help in the development of some CTD's (Ozturk, Muslu, & Dicle, 2008), and there are workplace barriers to using CTD that can be alleviated with time and experience (Raterink's research, 2008; 2011). The present study will attempt to address some of these inconsistencies by examining the impact of a continuing education course (*C&C ED in LTC*) on CTD and also exploring sociodemographic characteristics to see if they have a relationship with CTD. Additionally, as previous studies tend to focus on novice registered nurses, the present study will focus on multidisciplinary long-term care staff with varied backgrounds (e.g. experience, education, etc.).

The findings under the evaluating critical thinking (CT) programs and interventions theme concluded that most programs/training courses are beneficial to the development of general CT. Most of these studies discuss the evaluations of programs/training courses in various healthcare settings using small and uniform participant samples, emphasize qualitative analysis, and examine general CT rather than CTD. The Carter (2008) study is the only study under this theme that found no improvement in CTD as a result of the online nursing course.

The gap in the literature under this theme demonstrates the need to further investigate the development of CTD in the LTC setting (e.g. no studies were found to investigate CTD in the LTC setting), using a larger sample to make generalizations of the findings possible, and using multidisciplinary staff participants. *C&C ED in LTC* is a short course, therefore staff will be able to return to work duties promptly, a limitation found in other studies (Bob, 2009; Fronck et al., 2009). Further, the research design in the present study will collect more than just participant opinion on the program, it will measure a “pre and “post” change using mixed methodology allowing for triangulation of the data.

The origin and development of *C&C ED in LTC*, as well as a detailed description was provided under the *C&C ED in LTC* theme. *C&C ED in LTC* is a training course, was developed using an interprofessional approach, with a focus on person-centered care and the development of CTD in LTC staff.

The literature review that was included under the CTD measurement tools theme described the different instruments that measure CTD. It was concluded that the present study will use the CCTDI as it measures elements found in *C&C ED in LTC* (e.g. open-mindedness, confidence, and analytical abilities), is in keeping with the Simpson and Courtney (2007) conceptual model, and this instrument will provide information to help answer the present study’s research question.

The literature review that was included under the conceptual models for CT theme described three different conceptual models for CT. These conceptual models included: Colucciello conceptual model (1997), Simpson and Courtney conceptual model (2007), and the

Carter conceptual model (2008). The Simpson and Courtney conceptual model (2007) (Figure 2) will be used to support the current study as the conceptual model will help address the goals of the research.

### **Chapter 3: Methods**

This chapter describes all the procedures and processes in the pilot study. This chapter begins with a description of the research design, followed by a discussion of the study population, study sample and how participants were recruited. The next sections provide information on the research review and ethics approval process, how risks and drop outs were managed, a description of data collection procedures, the instruments used, and finally a discussion of the data analysis.

#### **Research Design**

The current pilot study used a pre-test-post-test mixed methodology design (see Figure 4). This design is the most common approach to program evaluations in settings where the program begins and ends at specific times, is directed to a group of people with similar needs, and results in similar opportunities for all participants (Bowling & Ebrahim, 2005; Posavac, 2011). When programs are relatively inexpensive, not harmful to participants, and fairly standard, complex evaluations are not needed (Bowling & Ebrahim, 2005; Posavac, 2011). The pre-test-post-test comparison offers a simple way to show change where each participant acts as his or her own control if interpolation is used to link participants' scores pre and post (Bowling & Ebrahim, 2005; Carter, 2008).

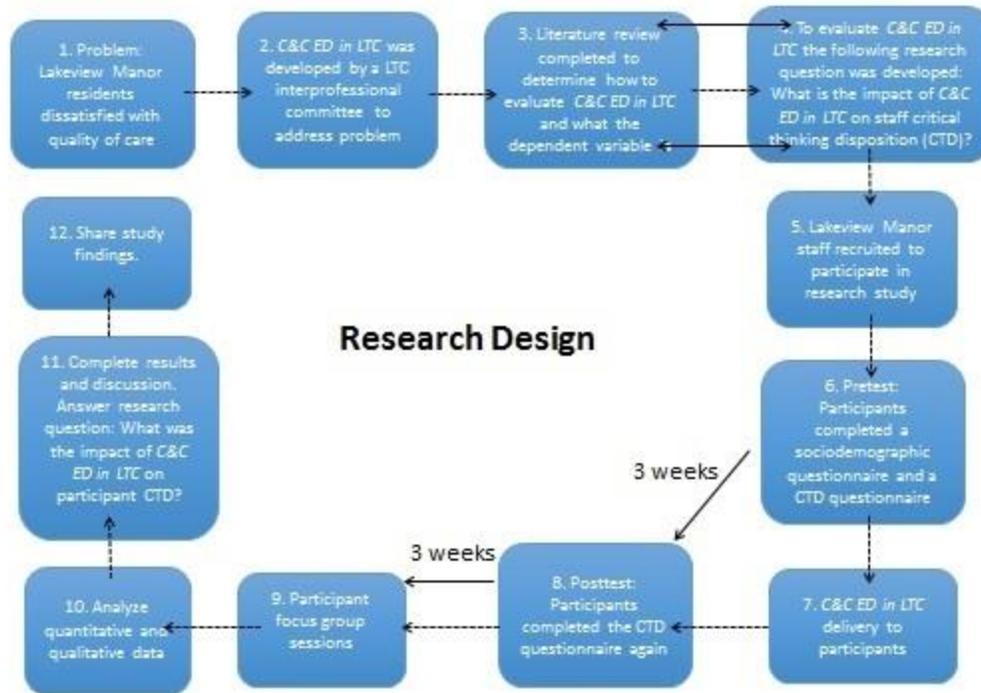


Figure 4. Research design.

Figure 4 shows the Research Design for the current pilot study. First, the problem of resident dissatisfaction was identified which led to the development of *C&C ED in LTC*. After a thorough literature review, the dependent variable was determined, the conceptual model chosen (Simpson & Courtney, 2007) and the research question developed. Staff at Lakeview Manor, a long-term care facility in Beaverton, Ontario, were then recruited and their critical thinking disposition (CTD) was measured before and after *C&C ED in LTC* was delivered to determine if there was change in CTD as a result of *C&C ED in LTC* (Facione & Facione, 2007). Staff completed a sociodemographic questionnaire and the California Critical Thinking Disposition Inventory (CCTDI) before (pre-test) *C&C ED in LTC* was offered. The CCTDI is a 75 item attitudinal survey with seven sub-scales, each a measure of a CT habit of mind or CTD. The CCTDI was completed again (post-test) after *C&C ED in LTC* was offered. Following this were

focus group sessions using the Repertory Grid Technique (RGT) (Feixas & Alvarez, 2000) in order to provide information on participants' personal constructs for CTD. Although the RGT was only completed post-test, this technique did ask participants for pre and post comparisons. The RGT involves the study of a person's own theories or personal constructs (Feixas & Alvarez, 2000) and a grid is built using "elements" and "constructs". Constructs are elicited through a process of questioning to compare two elements (e.g. people, things, events, etc.) to a third element that represents the opposite pole of the construct. The afore mentioned data was analyzed, the results and discussion written, and the research report was shared with Lakeview Manor staff and Durham Region administration.

Despite the advantages of the pre-test-post-test design, there are threats to internal validity that need to be addressed, which would have otherwise been resolved by incorporating a comparison group or repeated measures design. Maturation or the natural changes that occur in people due solely to the passage of time is one threat to internal validity for the pre-test-post-test design. History or events occurring between the pre-test and the post-test that affect the participants is another threat (Bowling & Ebrahim, 2005; Posavac, 2011). Both threats can be minimized when the length of time between pre-test and post-test is short in duration. However, the findings need to be interpreted with caution as these two threats cannot be eliminated.

The present pilot study used a sample of convenience or participants who volunteered to participate in the study. This sampling strategy was chosen in order to reach the largest sample size possible and follow principals of research ethics (e.g. avoid coercion, maintain

privacy and confidentiality, etc.). There are three threats to internal validity when participants are not a random or representative sample of the people who might benefit. These threats are selection, attrition and regression (Bowling & Ebrahim, 2005; Posavac, 2011). In the case of selection, when participation is voluntary, self-selected people are different from the typical members of the target population. The pre-test-post-test design addresses the effects of self-selection (Bowling & Ebrahim, 2005; Posavac, 2011). Also, the present study was only a pilot study whose purpose was less ambitious than being representative of all LTC staff at all LTC facilities. Similar to selection, attrition or a loss of participant numbers over a period of time is also addressed by the pre-test-post-test design. By pre-testing, it can be determined who dropped out and how they differed from those who remained (Bowling & Ebrahim, 2005; Posavac, 2011). Regression to the mean warns that whenever the value of a variable is extreme, the next measure of the variable is likely to be less extreme. The threat of regression is unlikely in the current study as the participant sample was not expected to have extremely high or low CTD. There are two final threats to internal validity, testing and instrumentation (Bowling & Ebrahim, 2005; Posavac, 2011). Testing, or the increased ability to recall information due to the act of testing is not a threat as the California Critical Thinking Disposition Inventory (CCTDI) is a Likert-style disposition inventory (e.g. measures attitude and values at that moment in time rather than ability to recall information), therefore there is no test effect in multiple administrations. The threat of instrumentation or the use of measurement procedures is a possibility as the CCTDI is a measurement tool, however the reliability and validity of this instrument is generally supported by the literature (Carter, 2008; Facione & Facione, 2014; Facione, Facione & Sanchez, 1994; Smith-Blair & Neighbors, 2000).

In the early development of the CCTDI, to establish construct validity, four scales of the instrument were examined in relationship to some personality attributes (Facione & Facione, 2014). Significant relationships were observed between the scales and 'openness to experience' construct in a sample of 200 students: Truth-seeking ( $r=.27$ ,  $p<.001$ ), Open-mindedness ( $r=.33$ ,  $p<.001$ ); Inquisitiveness ( $r=.37$ ,  $p<.001$ ), Confidence in Reasoning ( $r= .25$ ,  $p<.004$ ). Internal consistency reliability for the seven scales in the initial pilot sample ranged from .71 to .80, with the alpha for the overall instrument reaching .91 (Facione & Facione, 2014). Facione and Facione (2014) state that strong values have been observed consistently in samples collected over the past many years and range from .60 to .78 on the scales and .90 or above for the overall measure. Samples consisted of students completing academic degrees, health sciences employees (doctors, nurses, physical therapists, pharmacists), teachers and community volunteers, and mental health patients, to list a few.

The incorporation of focus group sessions using the Repertory Grid Technique (RGT) six weeks after *C&C ED in LTC* was offered, added a mixed method component to the design. According to Bowling and Ebrahim (2005), there may be several different and valid descriptions of the same phenomenon. Qualitative and quantitative techniques provide differing but non-competing representations. Therefore, using a mixed methodology design allows for capturing both representations. Further, it is the different strengths and weakness of each approach which demonstrates the benefit of using a mixed design (Bowling & Ebrahim, 2005). The RGT does require careful application, because overall reliability and validity may be an issue due to its inconsistent, non-standardised use in research (Johnson & Nádas, 2012). For example, using different rating scales, poor interviewer skill, and variation in construct elicitation are examples

of inconsistent application. However, with caution, this technique can provide some insight into personal constructs (Johnson & Nádas, 2012).

The RGT, as a methodology, is a “person-centred approach” that involves the study of a person’s own theories or personal constructs through which the world is perceived and responded to (Feixas & Alvarez, 2000). This technique evolved from George Kelly’s Personal Construct Theory (PCT) (Kelly, 1955). In keeping with PCT, people are scientists who create hypotheses to help with the interpretation and understanding of events. The hypotheses, or personal constructs, are bipolar in nature and provide a dimension of meaning allowing two events or elements (e.g. people, things, events, etc.) to be seen as similar but different from a third event which represents the opposite pole of the construct. The elements in the present study consisted of people. In clinical settings, elements are usually those people who are representative of the participant’s world or problem area (in this case *C&C ED in LTC*) and are the most significant people with whom the participant relates. According to Kelly (1955), people are guided by a network of constructs that are hierarchical. Core constructs define the person’s identity and are used to interpret past behaviour and predict future possible behaviours (Feixas & Alvarez, 2000). In addition to the CCTDI, the RGT may provide further insight into the CTD of staff participants and allow for triangulation of the data.

### **Population Under Study**

Participants for the current study were staff at Lakeview Manor. Lakeview Manor is part of Durham Region's network of long-term care facilities. Located in Beaverton, Ontario, Lakeview Manor has 149 beds for residents in the north end of Durham Region. The

participants were staff from a variety of disciplines including nursing, recreation and therapy, food services, environmental services, and administration (see Table 2 below).

Table 2

*A Summary of 2011 Staff Numbers at Lakeview Manor*

Staff Type	Lakeview Manor
Registered Nurses	12
Registered Practical Nurses	29
Health Care Aids	86
Food Services	27
Recreation and Therapy	12
Environmental Services	27
Administration	21
Total	214

### **Sample and Recruitment Strategy**

Staff employed by Lakeview Manor were included in the present study. Although participation in *C&C ED in LTC* was intended for all staff at Lakeview Manor, participation in the study was voluntary. Using a convenience sampling strategy, staff were recruited by posting flyers (see Appendix C) throughout the facility. The poster was also included in the staff newsletter and distributed by email by the staff social worker. Pre-test, post-test and focus group sign-up sheets were posted for participants to choose their preferred session (e.g. date/time). Prior to the post-test data collection and the focus groups, the poster was sent (by email) as an additional reminder to staff participants. To supplement the above staff recruitment strategy, an email memo was sent by the staff social worker to unit managers describing the research and participant involvement (see Appendix D). Staff were required to review the Letter of Invitation and complete the Consent form (see Appendix E) and attend a

brief information session provided by the Principal Investigator (PI). Using the two tailed test, alpha level of 0.05, effect size of 0.5 and power of 0.80 (Cohen, 1988), the total sample size was determined to be 64 participants.

### **Consultation and Ethics Approval**

Research review and ethics approval required a two-step process: 1) approval from the University of Ontario Institute of Technology (UOIT); 2) approval from Durham Region. At UOIT, the Research Ethics Board (REB) reviewed the research proposal outlined in an Application for Ethical Review of Research Involving Human Participants and provided approval (see Appendix F). At Durham Region, the Administrator of Lakeview Manor, the Director of the Division of Long-Term Care and Services for Seniors, and the Commissioner of Social Services reviewed a thesis proposal (e.g. summary of the proposed research project) and provided approval (see Appendix G).

The staff social worker completed a Confidentiality Agreement (see Appendix H) as she had access to completed questionnaires and stored in a locked drawer the participant list that matches names and code numbers.

### **Managing Risks and Drop Out**

There were three risks for staff participants in the present study. Completion of the CCTDI and participation in the planned focus groups may have caused some anxiety or feelings of inadequacy (e.g. psychological risk). Focus group participants may have experienced the social risk of lost of privacy, status, and/or reputation if participant identity/comments were repeated outside the group in the future. Also, there was the potential for LTC staff to feel coerced into contributing/participating in this research because of pressure from Lakeview Unit

Managers to further/force their education/training in ways with which the LTC staff may disagree.

As a means of managing these risks, they were explained in the Letter of Invitation and Consent (e.g. Benefits and Risks section and Voluntary Participation section of the letter). Further, all risks were explained by the PI while introducing the study. Participants were reminded that their participation was voluntary and they were provided the opportunity to ask questions about these risks. Further, staff could seek psychological support from the staff social worker or use the employee assistance program. Any emails to staff or managers which served the purpose of forwarding recruitment information, the staff social worker included in the email that she was forwarding the information on behalf of the researcher, participation was completely voluntary and the decision for staff to participate or not and/or withdraw from this study would not affect or compromise their position at Lakeview Manor.

Participants had the right to withdraw from participating in research. The Letter of Invitation and Consent included an option for participants to withdraw from the study without consequences to their employment at Lakeview Manor. Contact name and phone numbers for the PI was provided on the Letter of Invitation and Consent, to address any questions. After the pre-test, all data received by the PI was destroyed if the participant decided to withdraw from the study.

### **Data Collection Procedures**

Offering the *C&C ED in LTC* and the pre-test data collection period was planned to be held in the Main Hall at Lakeview Manor. Recruitment posters (see Appendix C) and sign-up

sheets indicating the date/time/location of data collection periods were posted two weeks in advance. Before the first data collection, the PI described the research project to staff participants. The program manager (who delivered *C&C ED in LTC* to staff) was not present at this time to minimize the situation that staff might feel pressured to participate. Next, staff participants provided informed consent to participate in the study. The Letter of Invitation and Consent (see Appendix E) included information about all research aspects requiring participation (e.g. CCTDI instrument before and after program, socio-demographic questionnaire and focus group sessions). Each participant indicated which aspect they agreed to participate in. The signed forms were collected by the PI and placed in an envelope. Participants kept a second copy of the consent form for their own information. At the first data collection period, before the instrument (e.g. The California Critical Thinking Disposition Inventory) was administered, socio-demographic information (see Appendix I) was collected from all participants. Participants completed the socio-demographic questionnaire and the CCTDI instrument (see Appendix J) in approximately 30 minutes. After completion of both the questionnaire and the CCTDI instrument, the PI verbally thanked the participants for participating in the study.

The PI was the data collector for the pre-test data collection and the planned focus group sessions in the current study. The staff social worker administered the post-test survey. For the pre-test data collection, the PI administered the instrument as well as the socio-demographic form as a package with a unique code number for each participant. A list of code numbers was passed around for participants to write their name beside their code number. Participants wrote their code number on the upper right-hand corner of the CapScore™

response form. A master list of each participant's name matched with their unique code number was created and secured for storage under lock-and-key by the staff social worker. It should be noted that the staff social worker signed a Confidentiality Agreement (see Appendix H) prior to administering the post-test survey and storing the master list.

The post-test survey was planned to be administered to participants three weeks after offering *C&C ED in LTC*. Prior to administering the post-test survey, the staff social worker, using the master list, handed the questionnaire package with code numbers to the appropriate participant so that they completed a package with the same code number as in the pre-test data collection. The staff social worker collected the completed questionnaires. Both the pre-test CCTDI and the post-test CCTDI were couriered together to Insight Assessment, the research firm that owns the rights to the questionnaire and conducts normative research using large pools of data. Insight Assessment then scanned the response forms, developed electronic data and provided descriptive information for all scores with pre-test and post-test data combined (e.g. mean, median, standard deviation, standard error or the mean, minimum and maximum scores, quartile 1 and quartile 3) and bar charts for each subscale showing frequency scores by qualitative category (e.g. strong negative, negative, inconsistent, positive and strong positive). Only the electronic data was used for the present study. The descriptive information was not useful as it did not separate pre-test and post-test results.

Three focus group sessions using the Repertory Grid Technique (RGT) were planned to be held six weeks after offering *C&C ED in LTC*. Focus groups ideally should be between six and eight participants and last between one and two hours (Bowling & Ebrahim, 2005). Focus group

participation was voluntary and the planned sessions were to be facilitated by the principle investigator (PI) using a receptive and sensitive style. The planned sessions were audio-recorded, and for transcription purposes, the PI would ask each participant to identify themselves (they did not need to use their own name) at the beginning of the tape. The PI would do a rough sketch of the seating plan to also help with recalling who said what during qualitative analysis (Bowling & Ebrahim, 2005). The planned sessions would open with initial ground-setting introductions followed by use of the RGT to guide the development of a group grid which illustrates the relationship between elements (e.g. people, things, events, etc.) and constructs (a dimension of meaning between elements). For the results of the grid to be valid, Feixas and Alvarez (2000) recommend a minimum of 10 elements and 10 constructs.

The elements were developed by the PI and provided to the participants. The elements consisted of the following: Self Before *C&C ED in LTC*, Self After *C&C ED in LTC*, Ideal Self, *C&C ED in LTC* Presenter, Co-Worker in Your Field, Co-Worker in Another Field, Your Manager, A Resident You Like, A Resident You Dislike, A Resident's Family Member (caregiver). The rationale behind these selected elements is to support answering the research question with elements that include significant people who the participants relate to within their LTC setting. Although Feixas and Alvarez (2000) recommend using no more than two self elements, because there would be too much emphasis on the self rather than other elements, the present study incorporated three self elements as *C&C ED in LTC* focuses on influencing how the self (participants) think and behave as individuals. It was planned that the elements would be written on flash cards as they were described to the staff participants and placed on a horizontal row on the table in the room. Additionally, the participants would be provided with

paper and a pen to write down their own personal elements to assist with recall. This horizontal row formed the top row of the group grid.

It was determined that after the elements were described, the group would then develop the constructs. The constructs measure the extent to which the group would consider the different elements. To develop the constructs, participants would be guided by the PI to discuss the first two elements and see how they were different from the third element. Kelly's original method, "How are two of these elements similar, and thereby different from a third element?" and then "How is the third element different from the other two?" was used. This difference or value is the construct. Then, it was planned that the group would be guided by the PI to decide a low end and a high end of the construct which made the construct a continuum. The PI would guide the group through all the elements eliciting as many constructs as possible. With each triad presented, there was only one new element introduced at a time and at least one self element was retained in each presentation in order to maintain the personal relevance of the elicited constructs (Feixas & Alvarez, 2000). Throughout the planned sessions, as required, the PI would prompt the groups using tactics such as summarizing and repeating what was said (Bowling & Ebrahim, 2005).

It was proposed that each polarity of the constructs would be written on flash cards and would form rows below the horizontal elements row. Following the recommendations found in the literature (Johnson & Nádas, 2012), the constructs formed a 7-point scale with the middle option being neutral. Most studies tend to use the 7-point scale, this would allow for comparability with other research studies and allow for enhanced participant understanding as long as the PI clearly explains each point and the scale is stable (Johnson & Nádas, 2012). To

give an example using the construct of honesty, the scale would be as follows: very honest, quite honest, slightly honest, middle neutral response, slightly dishonest, quite dishonest, and very dishonest. Each point of the scale would be clearly defined to participants, used consistently throughout the exercise, and would be written down for easy reference by the group.

Next, it was planned that the PI would lead the group through a process of plotting each element with each polar construct. The participants would rate each element against the constructs by placing the number associated with the element into the appropriate place on the 1-7 point scale between each of the constructs. Participants would fill in the rows from left to right, continuing on to a new row when the previous one was completed (Feixas & Alvarez, 2000).

If participants are unable to score an element along a construct, a neutral or middle response was assigned. The participants would be asked why they rated the elements as they did. These explanations provided the qualitative data for later analysis. After all the elements were plotted against the constructs, the grid would be complete. The final grid was documented (e.g. photographed) for later analysis along with the audio-recorded information. The grids would be transferred into *WebGrid 5* by the PI (Gains & Shaw, 2009).

## **Instruments**

The socio-demographic data to be collected for the current study included information on gender (e.g. male or female), age, profession, years of long-term care work experience, interdisciplinary training completed, highest education level achieved, and preconceived

notions of *C&C ED in LTC*. For age, following Smith-Blair and Neighbors (2000) approach, respondents chose one of the following: 20 to 24 years, 25 to 29 years, 30 to 39 years, 40 to 49 years, or 50 years and older. For profession, respondents chose one of the following: registered nurse, registered practical nurse, health care aid, recreation and therapy staff, food services worker, facility maintenance staff, administration or do not know. Years of long-term care work experience responses included less than 1 year, 2 to 5 years, 6 to 10 years, 11 to 15 years, 16 to 20 years, 21 years or more, or do not know. For interdisciplinary training completed responses included, none, some, occasional, frequent, very frequent, or do not know. For highest education level achieved, responses included no high school diploma, high school diploma, community college certificate, trade apprenticeship, college diploma, university degree, and graduate degree. The final two questions addressed preconceived notions of the program. The first question asked about how relevant *C&C ED in LTC* is and the response options include: not relevant to my job, somewhat relevant to my job, occasionally relevant to my job, very relevant to my job, or do not know. The second question asked if they feel the program is part of monthly education days, provides new tools and techniques for my job, is a continuing education course, and do not know. The socio-demographic questionnaire was reviewed by UOIT faculty for validity and clarity. Faculty reviewed each item to make sure the question and response options were clear and also suggested the addition of two more questions as previously described.

The California Critical Thinking Disposition Inventory (CCTDI), is a 75 item attitudinal survey with seven sub-scales, each a measure of a CT habit of mind. The instrument provides eight scores from an individual's CCTDI test which include an overall score of critical thinking

disposition and seven sub-scales. The sub-scales are Truth-seeking, Open-mindedness, Inquisitiveness, Analyticity, Systematicity, Confidence in Reasoning, and Maturity of Judgement (see Table 3 below). The instrument has 75 Likert style items where respondents indicate how much they agree or disagree. As discussed earlier in this chapter, the reliability and validity is well supported by the literature.

Table 3

*Seven Subscales of the California Critical Thinking Disposition Inventory (CCTDI) (Facione & Facione, 2014, p. 18)*

Subscale	Description
Truth-seeking	The habit of always desiring the best possible understanding of any given situation; it is following reasons and evidence where ever they may lead, even if they lead one to question cherished beliefs.
Open-mindedness	The tendency to allow others to voice views with which one may not agree. Open-minded people act with tolerance toward the opinions of others, knowing that often we all hold beliefs which make sense only from our own perspectives.
Inquisitiveness	Intellectual curiosity or the tendency to want to know things, even if they are not immediately or obviously useful at the moment.
Analyticity	The tendency to be alert to what happens next. This is the habit of striving to anticipate both the good and the bad potential consequences or outcomes of situations, choices, proposals, and plans.
Systematicity	The tendency or habit of striving to approach problems in a disciplined, orderly, and systematic way.
Confidence in Reasoning	The habitual tendency to trust reflective thinking to solve problems and to make decisions.
Maturity of Judgement	The habit of seeing the complexity of issues and yet striving to make timely decisions. A person with maturity of judgment understands that multiple solutions may be acceptable while yet appreciating the need to reach closure at times even in the absence of complete knowledge.

### Data Analysis

The independent variable was *C&C ED in LTC* and the dependent variable was critical thinking disposition (CTD). The CTD variable includes overall CTD as well as seven components of CTD which include: Truth-seeking, Open-mindedness, Analyticity, Systematicity, Confidence in Reasoning, Inquisitiveness, and Maturity of Judgement. Other variables such as staff type,

staff socio-demographic characteristics (age, gender, years of working experience, training completed, education level achieved), and staff preconceived notions of *C&C ED in LTC*, were examined to see if they had an effect on CTD. All variables were examined at the group level. The quantitative data from the CCTDI, as well as the socio-demographic data was analysed using *SPSS Version 19* (IBM Corp., 2010). To analyse the data for one group by two time periods (pre-test and post-test), it was planned that the t-test would be used in the current study (Lehman, 1991). The means for the CTD subscales were compared between testing periods. Correlations were completed to examine relationships between the socio-demographic variables and the CCTDI subscales.

In addition to the analysis of survey data previously described, it was planned that both qualitative and quantitative data would be collected from the focus groups (e.g. Repertory Grid technique). *WebGrid 5* software (Gains & Shaw, 2009) was used to develop and analyze the grids. The analysis involved examining all of the associations represented in the grids and constructing a representation of the group's value system with respect to the concepts alluded to in the elements and constructs. Reading the grids involved making note of the value in the cell or grid square. Numbers below 4 indicate an association with the pole on the left hand of the construct; numbers above 4 indicate an association with the right pole of the construct. The number 4 would indicate that the person completing the grid felt that the element was equally associated with both poles of the 'construct'.

Data focusing procedure was used to analyze the grids. Data focusing or the two-way cluster analysis of rows and columns shows any similarities with great clarity and is straight

forward to interpret. Also, data focusing uses distance coefficients as a measure of the association between variables rather than product-moment correlations used in Principal Components Analysis (Feixas & Alvarez, 2000). In addition to data focusing, *WebGrid 5* (Gains & Shaw, 2009) also performs three other procedures to analyze the grids. These include: display, map, and crossplot. Display shows the actual grid after all data has been entered into *WebGrid 5* (Gains & Shaw, 2009). The map analysis (Principal Component Analysis) shows constructs as dimensions in space and plots a map of the elements. Crossplot displays the elements in relation to the most important constructs (Gains & Shaw, 2009). These other procedures were used to analyze the grids.

It was established that the qualitative information from the transcribed audio-tapes would be analyzed in order to determine if any further insights could be derived from participant responses in relation to the elements and constructs. The transcription was completed by the PI. The transcription included a minimal number of symbols and marks (e.g. indicating pauses, change of tones, etc.) as this data was based on simple focus group responses and was used to complement the data in the group grids. This data was analyzed using the method of constant comparison. Rooted in the grounded theory approach, the constant comparison method has been refined, modified and enhanced to become one of the most commonly used interpretative analytical techniques. Focusing on the need for repeated comparison of parts of text with other parts, coding, reorganizing of text, development of themes and methods to display and combine data to form a conceptual scheme or pattern, this method is ideal for the analysis of the focus group data for the present study (Bowling &

Ebrahim, 2005). Further, the RGT elements and constructs were also used as a means of analyzing the text.

The method of constant comparison consists of three main stages: data reduction, data display and conclusion drawing. For the data reduction stage, to reduce the quantity and complexity of the data, labels or codes were assigned. This stage involved the reading and re-reading of the transcript (e.g. a Microsoft Word document), assigning codes to sections (e.g. using coloured font, or digital highlighting) and moving sections from the original transcript file into new files or documents. The code is a label that identifies the segment of text in terms of its meaning. With the method of constant comparison, the coding framework developed as the coding process proceeded (Bowling & Ebrahim, 2005) and new codes were added from the transcripts for each focus group. The next stage, data display, involved reorganizing and re-presenting the data. This involved examining the sections of the transcript with the same codes, called content analysis, and developing summaries of the similarities and differences related to the codes. This was done using tables to display the content of the coded information and facilitate comparison. It was planned that this process would be repeated with the transcripts from the three focus groups (Bowling & Ebrahim, 2005). The final stage, drawing conclusions involved further analysis and theorizing. The end point of this last stage was 'data saturation' where no further insights could be found from the transcripts, codes or display tables. The method of constant comparison requires a cyclical and iterative process of analysis followed by data collection followed by further analysis, etc. (Bowling & Ebrahim, 2005). After the qualitative analysis was completed, the qualitative findings were compared with the grid analysis to allow for triangulation.

## **Conclusion**

This chapter described the methods for the study and included information on the research design, the population and research sample, as well as the recruitment strategy. The process of research ethics review was discussed, participant risks and drop out was described, and the data collection procedures were outlined in detail. The chapter concluded with a description of the research instruments and the analysis of the data.

## Chapter 4: Results

This chapter presents the results for the study. This chapter begins with sociodemographic descriptive information and frequencies, followed by analyses of California Critical Thinking Disposition Inventory (CCTDI) data collected before (“pre”) and after (“post”) *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)*. The next sections provide correlations between the CCTDI and the sociodemographic data. The final sections include quantitative then qualitative data from the repertory grid technique.

### Participant Information and Sociodemographic Descriptive Data

The *C&C ED in LTC* was originally intended for all staff at Lakeview Manor, however, at the time the program was offered, Lakeview Manor decided that only staff volunteers would participate. Although participation in the research was still voluntary, the research sample was smaller as a consequence. There were 53 participants in the study (49 were female, 4 were male) who completed the sociodemographic survey, CCTDI and participated in *C&C ED in LTC*. Only 19 participants completed the post-test with the CCTDI. Therefore 34 participants did not complete the post-test and dropped out of the study. Of the 53 participants, almost half were 50 years and older. Thirty percent of the participants were 40 to 49 years of age. The remaining participants were 30 to 39 years old (17%), and only one participant was 25 to 29 years old and another participant was 20 to 24 years of age (see Table 4 below).

Table 4

*Participants' Age*

Age	Frequency	Percent
20 to 24 years old	1	1.9
25 to 29 years old	1	1.9
30 to 39 years old	9	17.0
40 to 49 years old	16	30.2
50 years and older	26	49.1
Total	53	100.0

Most of the participants were health care aids (56.6%), followed by registered practical nurses (17%), registered nurses (15%), and there were only a few administrative staff (7.5%) and facility maintenance staff (3.8%). These proportions are reflective of the staffing levels at Lakeview Manor (see Table 5 below).

Table 5

*Type of Profession*

Profession	Frequency	Percent
Registered nurse	8	15.1
Registered practical nurse	9	17.0
Health care aid	30	56.6
Facility maintenance	2	3.8
Administration	4	7.5
Total	53	100.0

Staff participants had a variety of experience levels in long-term care. Over 41% of participants had 21 years or more of experience, 17% had 2 to 5 years of experience and another 17% had 16 to 20 years of experience. The remaining participants had 11 to 15 years (13%) and 6 to 10 years (11%) (see Table 6 below).

Table 6

*Years of Long-Term Care Work Experience*

Years of experience	Frequency	Percent
2 to 5 years	9	17.0
6 to 10 years	6	11.3
11 to 15 years	7	13.2
16 to 20 years	9	17.0
21 years or more	22	41.5
Total	53	100.0

Participants were asked to indicate the number of interprofessional courses they completed.

Only one participant indicated they have no history of taking interprofessional courses. Almost 40% of participants indicated frequent (32%) or very frequent (7.5%), 28% indicated occasional, 30% indicated they have completed some interprofessional courses (see Table 7 below).

Table 7

*Number of Interprofessional Courses Completed by Participants*

Number of courses	Frequency	Percent
None	1	1.9
Some	16	30.2
Occasional	15	28.3
Frequent	17	32.1
Very frequent	4	7.5
Total	53	100.0

Participants indicated the highest level of education they have achieved. Half the participants have a college diploma, 32% have a community college certificate, 5.7% have a high school diploma, and 5.7% have a university degree. Only one person had a graduate degree and one person had no high school diploma (see Table 8 below).

Table 8

*Highest Level of Education Achieved*

Education level	Frequency	Percent
No high school diploma	1	1.9
High school diploma	3	5.7
Community College certificate	17	32.1
College diploma	26	49.1
University degree	3	5.7
Graduate degree	1	1.9
Subtotal	51	96.2
No response	2	3.8
Total	53	100.0

Table 9 shows frequency information for education levels for each of the five profession types.

This frequency information was provided in order to see if there is a pattern with education level achieved and profession type. Registered nurses predominately had the higher education levels (e.g. 5 college diplomas, 2 university degrees, and 1 graduate degree). Education levels for registered practical nurses and health care aids was very similar. Most registered practical nurses and health care aids had either a community college certificate or a college diploma. Of these two professions, about half had the college certificate and the other half had a college diploma. The only exception is a couple of health care aids had no high school diploma or only a high school diploma (one each). There was only two facility maintenance staff with one having a college certificate and the other a college diploma. For the four administration staff there was a range of education levels, with two having high school education, one having had college diploma and the last participant in administration had a university degree (see Table 9 below). The implications of these findings are that the education levels for the health professionals was as expected. Registered nurses have the higher education levels, with the other health professionals having slightly less education. These findings need to be interpreted

with caution as this is frequency information only, this analysis cannot indicate cause, and the sample size was small.

Table 9

*Highest Level of Education Achieved by Profession Type*

Profession/Education Level	Frequency	Percent for Profession	Percent Total
<b>Registered nurse</b>			
No high school diploma	0	0	0
High school diploma	0	0	0
Community College certificate	0	0	0
College diploma	5	62.5	9.4
University degree	2	25	3.8
Graduate degree	1	12.5	1.9
No response	0	0	0
<b>Total</b>	<b>8</b>	<b>100</b>	<b>15.1</b>
<b>Registered practical nurse</b>			
No high school diploma	0	0	0
High school diploma	0	0	0
Community College certificate	4	44.4	7.5
College diploma	4	44.4	7.5
University degree	0	0	0
Graduate degree	0	0	0
No response	1	11.1	1.9
<b>Total</b>	<b>9</b>	<b>100</b>	<b>17.0</b>
<b>Health care aid</b>			
No high school diploma	1	3.3	1.9
High school diploma	1	3.3	1.9
Community College certificate	12	40	22.6
College diploma	15	50	28.3
University degree	0	0	0
Graduate degree	0	0	0
No response	1	3.3	1.9
<b>Total</b>	<b>30</b>	<b>100</b>	<b>56.6</b>
<b>Facility maintenance</b>			
No high school diploma	0	0	0
High school diploma	0	0	0
Community College certificate	1	50	1.9
College diploma	1	50	1.9
University degree	0	0	0
Graduate degree	0	0	0
No response	0	0	0
<b>Total</b>	<b>2</b>	<b>100</b>	<b>3.8</b>
<b>Administration</b>			
No high school diploma	0	0	0
High school diploma	2	50	3.8
Community College certificate	0	0	0
College diploma	1	25	1.9
University degree	1	25	1.9
Graduate degree	0	0	0
No response	0	0	0
<b>Total</b>	<b>4</b>	<b>100</b>	<b>7.5</b>
<b>Total</b>	<b>53</b>		<b>100.0</b>

Participants were asked to indicate their perceived relevance of *C&C ED in LTC*. Most staff indicated *C&C ED in LTC* was either “very relevant” (34%) or “relevant” (41.5%). Remaining staff indicated “somewhat relevant” (9.4%), “occasionally relevant” (5.7%) or “do not know” (5.7%). Two staff had no response to this question (see Table 10 below).

Table 10

<i>Perceived Relevance of C&amp;C ED in LTC</i>		
Level of perceived relevance	Frequency	Percent
Somewhat relevant to my job	5	9.4
Occasionally relevant to my job	3	5.7
Relevant to my job	22	41.5
Very relevant to my job	18	34.0
Do not know	3	5.7
Subtotal	51	96.2
No response	2	3.8
Total	53	100.0

Participants were asked what they felt the purpose of *C&C ED in LTC* was. Half of the participants indicated *C&C ED in LTC* was a continuing education course. Thirty-four percent indicated *C&C ED in LTC* provides new tools and techniques for their job. The remaining participants indicated *C&C ED in LTC* was part of their monthly education days (1.9%) or they did not know (7.5%) (see Table 11 below).

Table 11

*Purpose of C&C ED in LTC*

Purpose	Frequency	Percent
Is part of our monthly education days	1	1.9
Provides new tools and techniques for my job	18	34.0
Is a continuing education course	27	50.9
Do not know	4	7.5
Subtotal	50	94.3
No response	3	5.7
Total	53	100.0

Table 12 shows frequency information for perceived purpose of *C&C ED in LTC* for each of the five profession types. This frequency information was provided in order to see if there is a pattern with perceived purpose of *C&C ED in LTC* and profession type. The largest portion of nurses (62.5 % of registered nurses and 55.6% of registered practical nurses) perceived *C&C ED in LTC* to be a continuing education course. Slightly more health care aids (46.7%) perceived *C&C ED in LTC* to provide new tools and techniques for the job compared to 43.3% perceived *C&C ED in LTC* to be a continuing education course. The participant numbers for facility maintenance and administration were too small for analysis. Although, this is frequency information only, this analysis cannot indicate cause, and caution must be taken when interpreting the results because of the small sample, the implications of these findings are that there may be a relationship between the more highly educated staff and perception of the training. The more educated staff may perceive the *C&C ED in LTC* to be a continuing education course.

Table 12

<i>Purpose of C&amp;C ED in LTC by Profession Type</i>			
Profession/Education Level	Frequency	Percent for Profession	Percent Total
<b>Registered nurse</b>			
Is part of our monthly education days	1	12.5	1.9
Provides new tools and techniques for my job	1	12.5	1.9
Is a continuing education course	5	62.5	9.4
Do not know	0	0	0
No response	1	12.5	1.9
<b>Total</b>	<b>8</b>	<b>100</b>	<b>15.1</b>
<b>Registered practical nurse</b>			
Is part of our monthly education days	0	0	0
Provides new tools and techniques for my job	1	11.1	1.9
Is a continuing education course	5	55.6	9.4
Do not know	2	22.2	3.8
No response	1	11.1	1.9
<b>Total</b>	<b>9</b>	<b>100</b>	<b>17.0</b>
<b>Health care aid</b>			
Is part of our monthly education days	0	0	0
Provides new tools and techniques for my job	14	46.7	26.4
Is a continuing education course	13	43.3	24.5
Do not know	2	6.7	3.8
No response	1	3.3	1.9
<b>Total</b>	<b>30</b>	<b>100</b>	<b>56.6</b>
<b>Facility maintenance</b>			
Is part of our monthly education days	0	0	0
Provides new tools and techniques for my job	0	0	0
Is a continuing education course	2	100	3.8
Do not know	0	0	0
No response	0	0	0
<b>Total</b>	<b>2</b>	<b>100</b>	<b>3.8</b>
<b>Administration</b>			
Is part of our monthly education days	0	0	0
Provides new tools and techniques for my job	2	50	3.8
Is a continuing education course	2	50	3.8
Do not know	0	0	0
No response	0	0	0
<b>Total</b>	<b>4</b>	<b>100</b>	<b>7.5</b>
<b>Total</b>	<b>53</b>		<b>100.0</b>

**CCTDI Pre and Post-C&C ED in LTC Analysis**

Table 13

*Summary of CCTDI Scores Pre and Post-C&C ED in LTC*

CCTDI	Pre-C&C ED in LTC/ Post-C&C ED in LTC	N	Mean	Std. Deviation	Minimum	Maximum
Truth-seeking	Pre-C&C ED in LTC	53	38.11	5.800	28	51
	Post-C&C ED in LTC	19	40.05	4.696	30	49
Openmindedness	Pre-C&C ED in LTC	53	38.57*	6.568	24	51
	Post-C&C ED in LTC	19	40.47*	5.680	29	48
Inquisitiveness	Pre-C&C ED in LTC	53	48.55	6.053	35	59
	Post-C&C ED in LTC	19	48.00	5.548	37	60
Analyticity	Pre-C&C ED in LTC	53	42.70	4.414	36	54
	Post-C&C ED in LTC	19	42.47	5.767	30	55
Systematicity	Pre-C&C ED in LTC	53	43.75	7.114	27	58
	Post-C&C ED in LTC	19	42.89	5.238	34	54
Confidence in Reasoning	Pre-C&C ED in LTC	53	42.74	6.013	29	53
	Post-C&C ED in LTC	19	42.32	6.290	28	53
Maturity of Judgement	Pre-C&C ED in LTC	53	44.83	5.341	35	57
	Post-C&C ED in LTC	19	45.84	5.824	33	54

\*Significant at the 0.05 level (2-tailed).

Table 14

*Qualitative Interpretation of CCTDI Scores (Facione & Facione, 2014, p. 29)*

Score	Interpretation
Scale scores in the 50 to 60 range	Strong Positive CTD
Scale scores in the 40 to 50 range	Positive CTD – indicates consistent endorsement of CTD
Scale scores in the 30 to 40 range	Inconsistent/Ambivalent CTD – indicates inconsistent endorsement of CTD
Scale scores in the 20 to 29 range	Negative CTD – poor valuation or aversion toward CTD
Scale scores in the 10 to 19 range	Strong Negative CTD – strong negativity or hostility toward CTD

Table 13 shows the mean scores, standard deviation, as well as the minimum and maximum scores for each subscale pre and post-C&C ED in LTC. As noted previously, 53

participants completed the pre-test and participated in *C&C ED in LTC* and only 19 participants completed the post-test. Therefore 34 participants dropped out of the study. Table 14 provides qualitative interpretation for different ranges of CCTDI scores. These qualitative interpretations were developed by Insight Assessment, creator of the CCTDI tool, and the interpretations provide an alternative approach to examining pre and post change in scores (moving from one interpretative category to the next). The five qualitative categories are based on scores ranging from low to high and each category covers a range of 9 or 10 score points. The five categories are: Strong Negative Critical Thinking Disposition (CTD), Negative CTD, Inconsistent/Ambivalent CTD, Positive CTD and Strong Positive CTD. Nonparametric tests were used because of the small sample size. The Related Samples Wilcoxon Signed Rank Test was used to compare means and determine if there was a significant increase pre and post-*C&C ED in LTC*.

As shown in Table 13, comparing Truth-seeking pre and post-*C&C ED in LTC*, the mean pre was 38.11 and post-*C&C ED in LTC* was 40.05. Although the mean score did increase by almost two points, there was no significant increase in CTD ( $Z=0.143$ ,  $p=0.886$ ). Using the score interpretation information in Table 14, pre scores for Truth-seeking ranged from 28 to 51. Therefore these scores fell within the qualitative categories negative CTD to strong positive CTD. The post scores for Truth-seeking ranged from 30 to 49. Therefore these scores fell within inconsistent CTD to positive CTD. The pre and post change in these categories was minimal (range of scores changed rather than CTD scores increasing).

Comparing Openmindedness pre and post-C&C ED in LTC, the mean pre was 38.57 and post-C&C ED in LTC was 40.47. The mean scores increased by almost 2 points, and there was a significant increase in CTD ( $Z=-1.923$ ,  $p=0.054$ ). The Openmindedness pre scores ranged from 24 to 51. Therefore these scores fell within the qualitative categories negative CTD to strong positive CTD. The Openmindedness post scores ranged from 29 to 48 and these scores fell within the negative CTD to positive CTD qualitative categories. Therefore, the post qualitative categories showed a decrease in scores. The Inquisitiveness pre mean was 48.55 and post mean was 48.00, obviously there was no significant increase in CTD ( $Z=-1.522$ ,  $p=0.128$ ). The Inquisitiveness pre mean scores ranged from 35 to 59 and the post means scores ranged from 37 to 60 for Inquisitiveness. Both score ranges fell within inconsistent CTD to strong positive CTD and therefore no change in categories was found. The Analyticity pre mean was 42.70 and post mean was 42.47, obviously there was no significant increase in CTD ( $Z=0.729$ ,  $p=0.466$ ). The pre Analyticity scores ranged from 36 to 54 and the post Analyticity scores ranged from 30 to 55, therefore both score ranges fell within the inconsistent to strong positive CTD. Therefore no change in qualitative categories was found. The Systematicity score pre mean was 43.75 and post mean was 42.89, obviously there was no significant increase ( $Z=-0.314$ ,  $p=0.754$ ). The pre Systematicity scores ranged from 27 to 58 (negative to strong positive CTD) and post Systematicity scores ranged from 34 to 54 (inconsistent to strong positive). The post qualitative categories showed an improvement in CTD as the scores shifted in category from negative and strong positive range (pre) up to inconsistent and strong positive range (post).

The final two subscales include the Confidence in Reasoning scale and the Maturity of Judgement scale. The pre Confidence in Reasoning mean was 42.74 and post mean was 42.32,

again, obviously there is no significant increase in CDT for this scale ( $Z=-0.309, p=0.758$ ). The range of scores for pre Confidence in Reasoning was 29 to 53 which falls under the negative to strong positive CTD. The range of scores for post Confidence in Reasoning was 28 to 53 and also falls under the same qualitative categories. Therefore, no change in qualitative categories was found. The last subscale, Maturity of Judgement, had a pre mean of 44.83 and a post mean of 45.84. Although there was an increase in mean score of one point, it was not significant ( $Z=-0.499, p=0.618$ ). The range of scores for pre Maturity of Judgement was 35 to 57 and the range of scores for post Maturity of Judgement was 33 to 54 (both fell under inconsistent to strong positive CTD qualitative categories). Therefore, again there was no change in qualitative categories. Overall, a significant difference was found pre and post for Openmindedness. No other significant difference was found for the other subscales. The interpretation using the qualitative categories showed only an improvement in CTD for the Systematicity scale as the scores shifted up a category from pre to post (the lowest post scores fell within the inconsistent category where staff participants were more likely to value Systematicity than before).

Table 15

*Report of CCTDI Scores Pre and Post-C&C ED in LTC Frequency Analysis*

Scale	Pre-C&C ED in LTC			Post-C&C ED in LTC		
	Strong Positive (%)	Positive (%)	Total (%)	Strong Positive (%)	Positive (%)	Total (%)
Truth-seeking	1.9	39.6	41.5	0	52.6	52.6
Openmindedness	3.8	35.8	39.6	0	57.9	57.9
Inquisitiveness	50.9	47.2	98.1	36.8	63.2	100
Analyticity	9.4	71.7	81.1	10.5	68.4	78.9
Systematicity	26.4	43.4	69.8	15.8	63.2	79
Confidence in Reasoning	13.2	56.6	69.8	10.5	68.4	78.9
Maturity of Judgement	20.8	62.3	83.1	36.8	63.2	100

Table 15 shows the CCTDI data in terms of percentage of scores for each scale that fall in the qualitative performance categories of strong positive and positive CTD pre and post-C&C ED *in LTC*. Contrary to the findings in Table 13 and the results of the Related Samples Wilcoxon Signed Rank Test, the above frequency analysis shows more positive results. Although the pre and post percentages are comparable in Inquisitiveness and Analyticity, the post-C&C ED *in LTC* scores are stronger in several other areas. Specifically, there are signs of improvement in the CTD scores post-C&C ED *in LTC* for Truth-seeking, Openmindedness, Systematicity, Confidence in Reasoning, and Maturity of Judgement. The scales, Openmindedness and Maturity of Judgement, in particular, showed signs of improvement after C&C ED *in LTC*.

**CCTDI and Sociodemographic Correlations**

Table 16

*Kendall's Tau Coefficient Correlations with CCTDI (Pre-C&C ED in LTC)*

Sociodemographic Variable	Truth-seeking	Openmindedness	Inquisitiveness	Analyticity	Systematicity	Confidence in Reasoning	Maturity of Judgement
Respondent's age							
Correlation Coefficient	0.114	0.126	0.022	-0.042	0.135	-0.074	0.055
Sig. (2-tailed)	0.303	0.252	0.841	0.706	0.219	0.503	0.621
N	53	53	53	53	53	53	53
Years of LTC work experience							
Correlation Coefficient	-0.233*	-0.226*	-0.247*	-0.109	-0.176	-0.077	-0.162
Sig. (2-tailed)	0.029	0.033	0.020	0.309	0.097	0.468	0.130
N	53	53	53	53	53	53	53
Amount of interprofessional courses completed							
Correlation Coefficient	-0.084	0.006	0.125	-0.136	-0.131	0.192	-0.111
Sig. (2-tailed)	0.439	0.955	0.246	0.211	0.224	0.074	0.306
N	53	53	53	53	53	53	53
Perceived relevance of C&C ED in LTC							
Correlation Coefficient	0.282*	0.204	0.236*	0.008	-0.111	0.066	0.062
Sig. (2-tailed)	0.011	0.065	0.034	0.944	0.315	0.553	0.576
N	51	51	51	51	51	51	51

\*Correlation is significant at the 0.05 level (2-tailed).

Table 16 shows Kendall's Tau Correlations for four sociodemographic variables and the CCTDI scales pre-C&C ED in LTC. Pre-C&C ED in LTC scores were used because N was higher than post-C&C ED in LTC scores. There were no significant correlations between CCTDI scales and age, or amount of interprofessional courses completed. However, there were significant correlations for years of LTC work experience and perceived relevance of C&C ED in LTC. Years of LTC work experience had low negative correlations with Truth-seeking ( $\tau = -0.233$ ,  $p = 0.029$ ), Openmindedness ( $\tau = -0.226$ ,  $p = 0.033$ ), and Inquisitiveness ( $\tau = -0.247$ ,  $p = 0.020$ ). Therefore, the greater the years of LTC work experience, the lower the scores for the Truth-seeking scale, Openmindedness scale, and Inquisitiveness scale. Perceived relevance of C&C ED in LTC (to job) had low positive correlations with Truth-seeking ( $\tau = 0.282$ ,  $p = 0.011$ ) and Inquisitiveness ( $\tau =$

0.236,  $p = 0.034$ ). Therefore, as perceived relevancy (to job) increases, scores for Truth-seeking and Inquisitiveness also increase.

Table 17

*Point Biserial Correlations with CCTDI (Pre-C&C ED in LTC)*

Sociodemographic Variable	Truth-seeking	Openmindedness	Inquisitiveness	Analyticity	Systematicity	Confidence in Reasoning	Maturity of Judgement
Respondent's gender							
Correlation Coefficient	-0.006	0.217	-0.026	0.085	0.081	0.097	0.104
Sig. (2-tailed)	0.968	0.119	0.853	0.545	0.565	0.491	0.460
N	53	53	53	53	53	53	53
Type of profession							
Correlation Coefficient	-0.051	-0.058	-0.009	0.108	-0.110	-0.025	0.041
Sig. (2-tailed)	0.717	0.681	0.949	0.442	0.432	0.862	0.771
N	53	53	53	53	53	53	53
Highest level of education achieved							
Correlation Coefficient	0.239	0.330*	0.152	0.224	0.305*	0.402**	0.113
Sig. (2-tailed)	0.091	0.018	0.288	0.114	0.030	0.003	0.430
N	51	51	51	51	51	51	51
Purpose of C&C ED in LTC							
Correlation Coefficient	0.292*	0.135	0.145	-0.102	-0.004	-0.145	0.179
Sig. (2-tailed)	0.039	0.351	0.316	0.479	0.980	0.316	0.213
N	50	50	50	50	50	50	50

\*\*Correlation is significant at the 0.01 level (2-tailed).

\*Correlation is significant at the 0.05 level (2-tailed).

Table 17 shows Point Biserial Correlations for the remaining four sociodemographic variables and the CCTDI scales. There were no significant correlations for CCTDI scales and gender, or type of profession. However, there were significant correlations for highest level of education achieved and purpose of *C&C ED in LTC*. Highest level of education achieved had moderate positive correlations with Openmindedness ( $r_{pbi} = 0.330$ ,  $p = 0.018$ ), Systematicity ( $r_{pbi} = 0.305$ ,  $p = 0.030$ ), and Confidence in Reasoning ( $r_{pbi} = 0.402$ ,  $p = 0.003$ ). Therefore, higher levels of education were related to higher Openmindedness, Systematicity, and Confidence in Reasoning scores. There was also a significant low positive correlation between purpose of *C&C ED in LTC* and Truth-seeking ( $r_{pbi} = 0.292$ ,  $p = 0.039$ ). Therefore, higher Truth-seeking scores

were found in respondents who felt the purpose of the *C&C ED in LTC* was to act as a continuing education course. In summary, these two sets of correlations showed relationships with several CCTDI scales and years of LTC work experience, perceived relevance of *C&C ED in LTC*, highest level of education achieved and purpose of *C&C ED in LTC*.

### **Repertory Grid Quantitative Results**

Only one participant was able to participate in the RGT. Therefore, instead of the planned focus groups, an individual interview was completed.

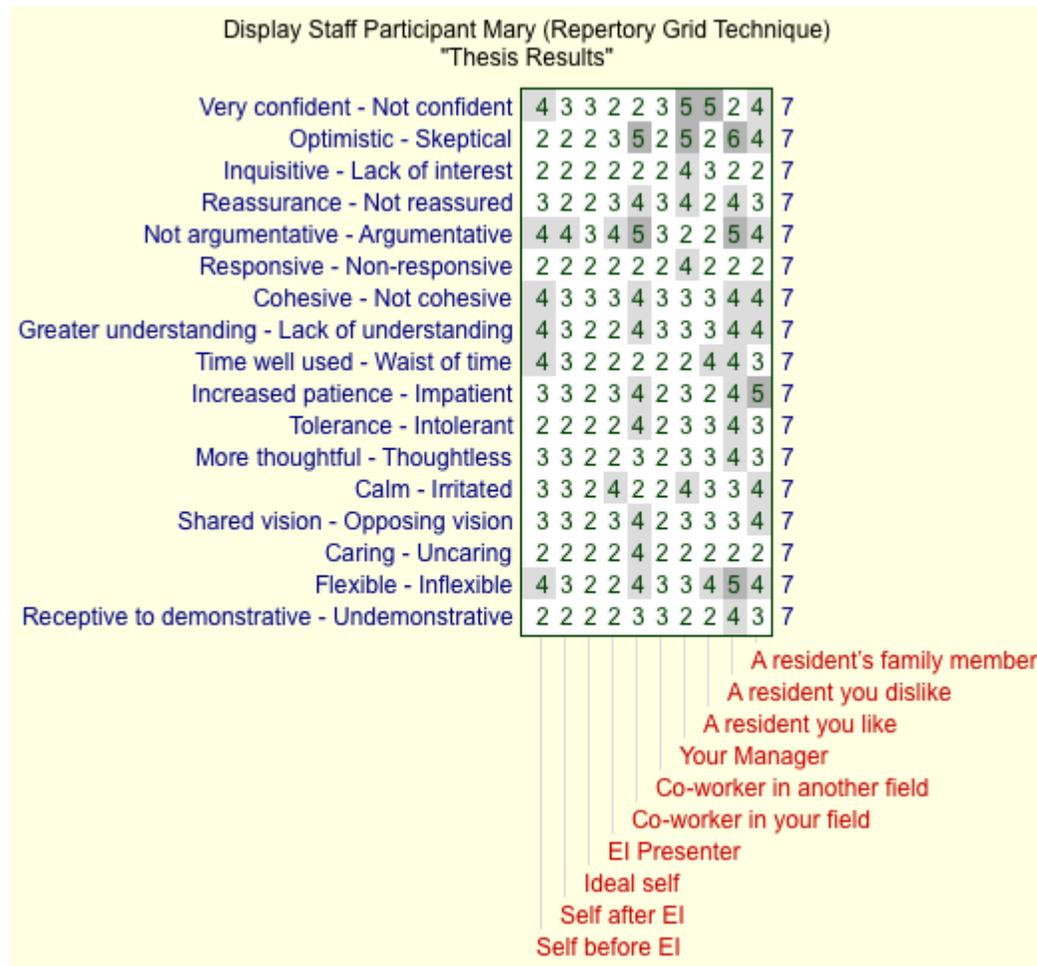


Figure 5. Mary's repertory grid depicting her thinking about *C&C ED in LTC* and the different people she interacts with at Lakeview Manor. Note: EI = *C&C ED in LTC*.

Figure 5 shows the repertory grid developed by Mary (pseudonym), a staff participant at Lakeview Manor. The 10 elements (red), as described in Chapter 3, are shown as columns. The 17 constructs (blue), developed by Mary are shown as rows. The ratings observed are predominantly in the positive end of the scale (e.g. mostly rated as 2 or 3). No shading is used on lower ratings (e.g. 2s and 3s). Darker shading is used for higher numbers (e.g. 4s and 5s).

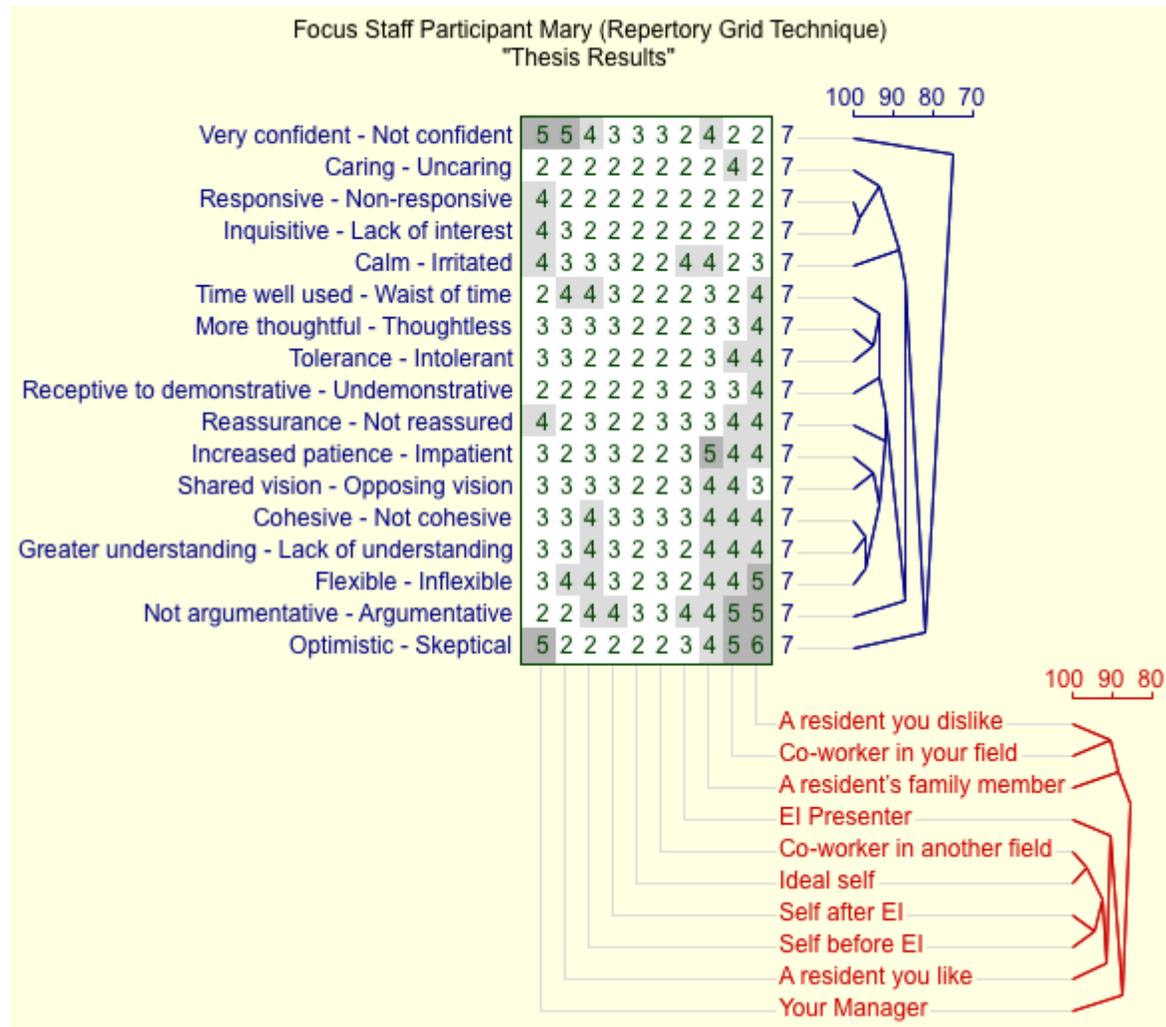


Figure 6. Focus cluster analysis on Mary's repertory grid. Note: EI= C&C ED in LTC.

The focus cluster analysis (see Figure 6) sorts Mary's elements to bring similar ones together, and sorts her constructs to bring similar ones together as well. There was a fairly strong correlation (95%) between responsive-inquisitive constructs across the elements. Those elements or people who Mary rated higher for being responsive were also rated higher for being inquisitive. Looking in more detail at the pattern rating on the grid, Mary rated both these constructs similarly.

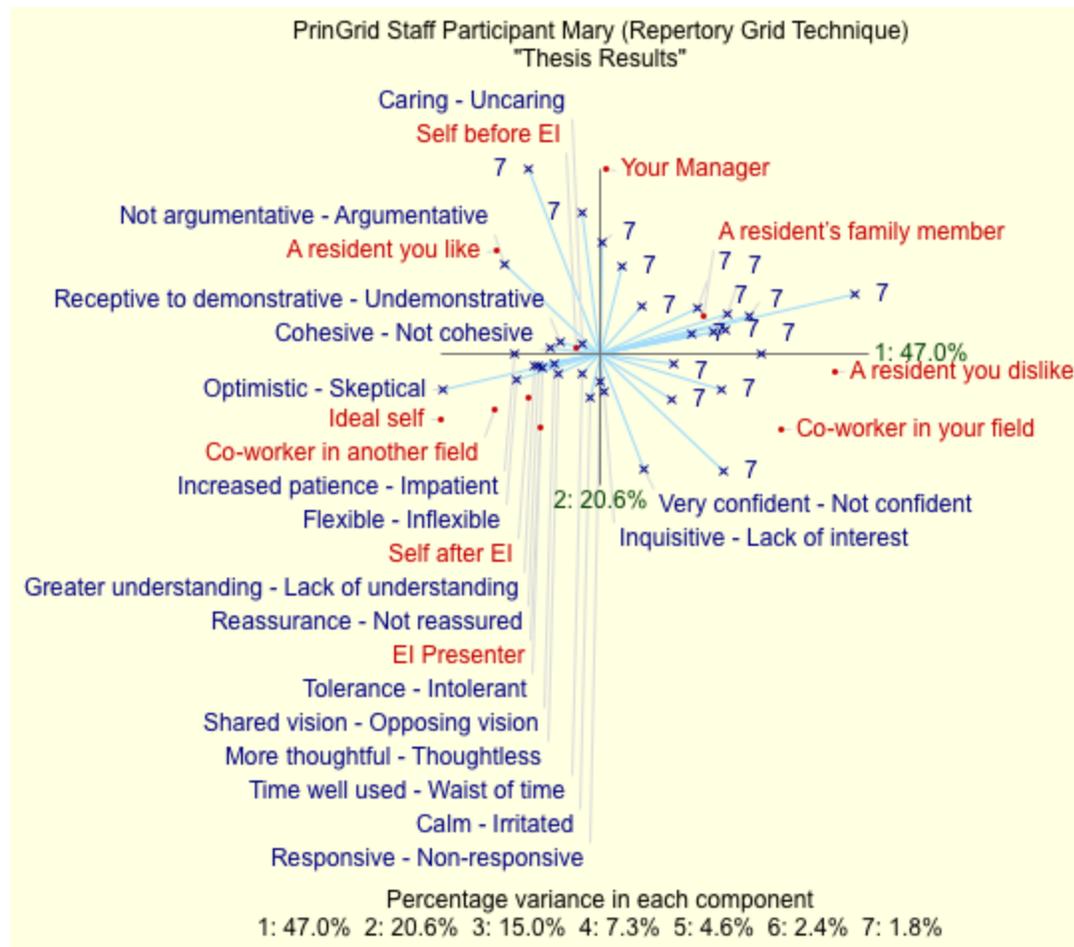


Figure 7. Mapped grid analysis on Mary's repertory grid. Note: EI = C&C ED in LTC.

The map analysis (see Figure 7) treats the constructs (blue) as dimensions in space and plots a map of the elements (red). These findings are inconclusive as no definitive clusters were found.

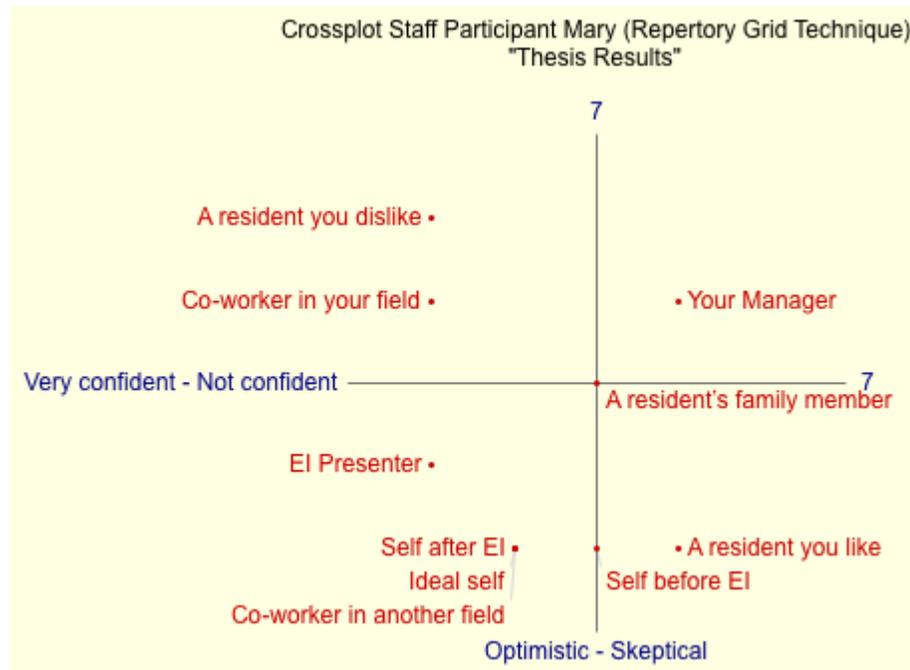


Figure 8. Crossplot analysis on Mary's repertory grid. Note: EI = C&C ED in LTC.

The crossplot analysis (see Figure 8) displays the elements (red) plotted on three constructs (blue) (x axis is very confident – not confident, y axis is optimistic – skeptical, and z axis is inquisitive – lack of interest). Focusing on only three constructs allows for easier interpretation. There appear to be three clusters shown in the crossplot. The bottom left quadrant is plotted: *C&C ED in LTC* Presenter, Self after *C&C ED in LTC*, Ideal Self and Co-Worker in Another Field with optimistic and very confident constructs. Optimistic and confident are CTD attributes. Therefore, there seems to be a relationship with *C&C ED in LTC* Presenter, Mary After *C&C ED in LTC*, Mary's Ideal Self, and Co-Worker in Another Field, and CTD. The bottom right quadrant is plotted: A Resident You Like and Self Before *C&C ED in LTC* with optimistic and not confident. Therefore, with these two elements, there appears to be a positive relationship with one aspect of CTD (optimism) and a negative relationship with another aspect of CTD (confident). The top left quadrant is plotted: A Resident You Dislike and Co-Worker in Your

Field with very confident and skeptical. Again, with these two elements, there appears to be a positive relationship with CTD (confident) and a negative relationship with CTD (skepticism).

In summary, three different analyses were completed for the repertory grid. The focus cluster analysis revealed a fairly strong correlation (95%) between responsive-inquisitive constructs across the elements. The map analysis revealed inconclusive results. The crossplot analysis showed three clusters of elements as having relationships with CTD (optimism, confident, not confident or skepticism).

### **Repertory Grid Qualitative Results**

The qualitative results of this study consist of data collected from the one interview following the Repertory Grid Technique. In addition to the development and analysis of the numeric grid discussed in the previous section, the spoken conversation during the grid development was recorded for qualitative analysis. The transcript was analysed using the method of constant comparison. Unfortunately, little qualitative data was collected during the assigning of elements, construct elicitation, or the plotting of the grid. However, interesting to note was that Mary (pseudonym) demonstrated CTD during the course of the interview. Her thinking during the interview demonstrated CT maturity and analyticity. For example, the following quote demonstrates CT maturity:

The resident I thought of is still alive and it wasn't that I really dislike her. It is her traits. I can't think of any resident that I dislike. But she had some traits there were really not pleasant. She was very argumentative and quite unkind to her fellow residents. So that

is what I was thinking. I did not really have a bad relationship with her. Some of her traits were not very pleasant.

During the elicitation of constructs, Mary demonstrated analyticity by saying:

The resident actually has very advanced dementia. So just being able to communicate with her is wonderful. And she does very well with hugs and just being very tactile. She likes to be hugged and reassured. So reassurance is probably... not sure if that's ok?

Furthermore, some of the constructs she developed are CTD attributes (see Figure 2, Simpson & Courtney conceptual model, 2007). For example, the following constructs Mary developed are CTD attributes: very confident – not confident, and inquisitive – lack of interest. Also, optimistic – skeptical and flexible – inflexible constructs are similar to open-minded, and greater understanding – lack of understanding and more thoughtful - thoughtless constructs are similar to truth seeking. The implications of these findings are that Mary was able to demonstrate and apply CTD. Although, these qualitative findings cannot conclude that Mary's CTD improved as a result of the training, these findings do indicate that Mary applied CTD in an interaction and this allows for some level of triangulation with the other RGT findings and the CCTDI results.

## Chapter 5: Discussion

This chapter discusses the findings of the study and how the findings relate to the literature.

In the 2013 report *Living Longer, Living Well*, a report submitted to the Ministry of Health and Long-Term Care to inform a Seniors Strategy for Ontario, Sinha (2013), made the following key recommendation:

The Ministry of Health and Long-Term Care should support mechanisms to maximize the knowledge and skills of LTC home staff with additional training opportunities and support them in releasing their time to care through quality and process improvement initiatives through programs such as Residents First, the Behavioural Supports Ontario (BSO) Initiative, the Long-Term Care Best Practice Guideline Coordinator Initiative, and the new Centres for Learning Research and Innovation and Long-Term Care. (p. 13)

*Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* developed by Lakeview Manor staff for Lakeview Manor staff, served the purpose of assisting staff with the development of critical thinking disposition (CTD). The research question for the current study was: what is the impact of *C&C ED in LTC* on staff thinking disposition (CTD)? The findings, especially the qualitative interpretations (see Table 15), indicated that *C&C ED in LTC* may have had a positive impact on the development of CTD in LTC staff. This is important because strong CTD may help staff provide better quality care to residents in the challenging LTC environment and may help staff achieve greater job satisfaction.

The Simpson and Courtney (2007) conceptual model was used to guide the evaluation of *C&C: ED in LTC* (that assists staff with the development of CTD) by examining its impact on staff CTD. This conceptual model was helpful in guiding the analysis and supporting the structure of the research. It includes the core components of CT based on Facione's (1990) Delphi research, and allowed the principal investigator to identify and focus on specific components (e.g. CTD, *C&C ED in LTC* which is a CT strategy, and evaluation). The methods of evaluation were chosen based on the information in the conceptual model. In particular, the California Critical Thinking Disposition Inventory (CCTDI) was selected as it measures the CTD variables listed in the model and focus groups were planned as it is recommended in the conceptual model.

In the present study, there were 53 participants, mostly older females (almost 50% over 50 years of age), most were health care aids, registered practical nurses or registered nurses with many years of LTC experience. These are the types of staff (profession) who spend the most time working directly with residents, and health care aids and registered practical nurses in particular, are the highest proportion of staff at Lakeview Manor. Most of the courses (at work) that staff indicated they completed was interprofessional, and most staff are community college-educated. The participants perceived that *C&C ED in LTC* would provide relevant information for their work and thought *C&C ED in LTC* was either a continuing education course or would provide new tools and techniques for their jobs. Based on the characteristics of constructivist learning, if *C&C ED in LTC* is perceived to be relevant and helpful, then staff learners may be more in a position to construct new knowledge and develop CTD (Applefield et al., 2001).

In more detail, the results showed a significant increase in Openmindedness, the mean CTD scores were predominantly in the positive qualitative category, Systematicity scores showed an increase in the qualitative category, and there was an increase in percentage of staff scoring in the positive and strong positive CTD categories after participating in *C&C ED in LTC* for Truth-seeking, Openmindedness, Systematicity, Confidence in Reasoning, and Maturity of Judgement. In addition to *C&C ED in LTC*, other factors show associations with CTD. There were significant correlations for years of LTC work experience (negative correlations), perceived relevance of *C&C ED in LTC* (positive correlations), highest level of education (positive correlation) achieved and purpose of *C&C ED in LTC* (positive correlation). The quantitative and qualitative RGT results show some relationships with CTD and the components of *C&C ED in LTC*. The focus cluster analysis revealed a fairly strong correlation (95%) between responsive-inquisitive constructs across the elements. The crossplot analysis showed three clusters of elements as having relationships with CTD (optimism, confident, not confident or skepticism). Also, Mary demonstrated CTD during her interview and some of her constructs were CTD attributes.

The only significant difference found pre and post-*C&C ED in LTC* for the California Critical Thinking Disposition Inventory (CCTDI) means was for Openmindedness. This finding is not all that surprising given *C&C ED in LTC* is only a one-hour course. Expecting a modest increase in all CTD scales over a few weeks after the short course, perhaps, is not realistic. Duration of *C&C ED in LTC* and allowing time for CTD to develop are important factors to consider. Carter (2008) only found a significant increase in Truth-seeking scores in students

who completed a four-month university course. However, this significant finding for the present study, does show that *C&C ED in LTC* may help with the development of CTD.

The limited significant differences found in the present study for pre and post CCTDI means (e.g. only Openmindedness was significant) contrasts with the Bartlett and Cox (2002) study where physical therapy students CTD scores were taken at specific times during their academic and clinical portions of their education over a year. Statistically significant improvements in all CCTDI scales were found in the Bartlett and Cox (2002) study. An important distinction between the two studies is the Bartlett and Cox (2002) study participants are students completing their core baccalaureate education, whereas in the present study, staff completed a one-hour training course. Additionally, the baccalaureate education included both an academic component and a clinical component. This difference, type of education (core baccalaureate education with a clinical component versus continuing education only), duration of education (one year versus one hour) and allowing time for CTD to develop, may be key reasons why there were significant improvements in the participants of the Bartlett and Cox (2002) study and limited significant differences in the present study. Despite the limited significant findings in the present study, the CCTDI scores are congruent with Wangenstein et al. (2010), who also found the highest mean score to be on the Inquisitiveness subscale and the lowest on the Truth-seeking subscale (see Table 13).

A closer examination of where the scores fall within the qualitative categories (see Chapter 4, Table 14 for a description of the qualitative categories) may be a more realistic way to see if there was some level of improvement or change in CTD pre and post-*C&C ED in LTC*.

Overall, the mean scores, in the present study were predominantly in the positive qualitative category. Therefore, participants consistently endorse using and applying CTD. This result is comparable to the Suliman and Halabi (2006) study where the participants were in the positive qualitative category for five of the seven CTD scales. Lakeview Manor staff, *C&C ED in LTC* and staff education (positive correlation was found between highest level of education achieved and CTD) may have contributed to the development of positive CTD.

Raterink (2008) suggests that studies conducted with a qualitative focus are more likely to demonstrate general CT than studies using quantitative, generalized assessment tools. The CCTDI, a general assessment tool used in the present study, also has a qualitative approach to analysing results. In the present study, there was an indication of improved CTD when examining change or shift in qualitative categories pre and post-*C&C ED in LTC*. For Systematicity, there was improvement, although this finding needs to be interpreted with caution and cannot be used as a generalization for a larger population. Furthermore, there were signs of improved CTD in staff participants when examining percentage of scores that fall in the qualitative categories pre and post-*C&C ED in LTC*. There was an increase in percentage of staff scoring in the positive and strong positive CTD categories after participating in *C&C ED in LTC*. Improvements were found in five of the seven CTD scales: Truth-seeking, Openmindedness, Systematicity, Confidence in Reasoning, and Maturity of Judgement. Especially, Openmindedness and Maturity of Judgement showed signs of improvement after *C&C ED in LTC*. Again, this finding needs to be interpreted with caution; however, it does provide an indication that *C&C ED in LTC* may have a positive impact on CTD in LTC staff.

The literature demonstrates that there are a number of qualitative studies that show improved CT as a result of an intervention. Forneris and Peden-McAlpine's (2007) case study found that a contextual learning intervention assisted in CT development. Lamont et al. (2010) mixed methodology study established that an action learning set supports and encourages engaging in CT to solve problems. Bob's (2009) qualitative study of novice nurses showed that a brief and structured discussion with an expert nurse at the start of every shift improves novice nurses' ability to use CT. Also, drawing from the findings of the Fronek et al., (2009) qualitative study of CT and boundary violations, participants reported that the course provided them with the opportunity to practice CT strategies, and they learned to apply general CT in the workplace.

In addition to *C&C ED in LTC*, other factors show associations with CTD. There were significant correlations for years of LTC work experience (negative correlations), perceived relevance of *C&C ED in LTC* (positive correlations), highest level of education (positive correlations) achieved and purpose of *C&C ED in LTC* (positive correlations). The negative correlation for years of LTC work experience and CTD is surprising. Greater LTC experience is associated with a lower drive for Truth-seeking, Openmindedness and Inquisitiveness. Although correlations do not imply causality, it does show there is a relationship. The LTC environment is a challenging place to work (Li & Porock, 2014). Residents' dying is a regular event. Many residents do not choose to be in LTC, but rather are forced to leave the comfort and privacy of their home due to medical issues and the need for assistance (Li & Porock, 2014). Residents' current state of health and dependency on others can be frustrating and depressing (Li & Porock, 2014). Caring for this population can take its toll on staff and over time may lead

to feelings of discouragement, hopelessness, a decreased drive to maintain a positive CTD.

Future research could examine CTD in experienced LTC staff to determine if there are changes over time (longitudinal research) or differences between new staff and veteran staff. Bob (2009) and Forneris and Peden-McAlpine's (2007) studies incorporate senior staff mentoring and guiding novice staff in their development of CT. Future research needs to be cautious, because of the negative correlation, and ensure that the senior staff are strong critical thinkers.

The remaining three positive correlations (perceived relevance of *C&C ED in LTC*, highest level of education achieved, purpose of *C&C ED in LTC*) are easier to comprehend, although again, significant correlations do not indicate cause. As staff perceives *C&C ED in LTC* to be more relevant to their jobs, it makes sense that CTD increases. This is in keeping with the principles of adult learning, motivation to learn, and Constructivist Learning Theory (Garmston & Wellman, 1994). Learning occurs, knowledge is constructed, CT is utilized when the adult learners are involved, collaborating and making the learning experience relevant to them and to their practice. Bartlett and Cox (2002) did not identify any significant correlations for CTD and demographic data (sex, age, years of completed post-secondary education, the highest level of education completed). This was likely due to a small sample of uniform participants (e.g. students with similar age, gender, education, etc.).

Those factors that did not significantly correlate with CTD include: age, amount of interprofessional courses completed, gender and type of profession. The low number of male participants makes the gender correlation analysis difficult to complete. The finding for age contrasts with Wangensteen et al. (2010) study where participants over 30 years had

significantly higher CTD scores. The Wangenstein et al. (2010) study benefited from a large sample size making analysis more robust. However, the finding for age is similar to Carter (2008) and Bartlett and Cox (2002) where there was no significant association between age and CTD scores.

The quantitative and qualitative RGT results show some relationships with CTD and the components of *C&C ED in LTC*. The RGT quantitative analysis had two main findings. There was a fairly strong correlation (95%) between responsive-inquisitive constructs across the elements and three clusters of elements were found to have a relationship with CDT (very confident – not confident construct and optimistic – skeptical construct). The correlation indicates that those elements or people who Mary rated higher for being responsive were also rated higher for being inquisitive. This correlation makes sense as inquisitive is a CTD and responsiveness could be seen as the outcome or action due to inquisitive thinking. Facione and Facione (2014) describe inquisitiveness as a curiosity and eagerness to acquire new knowledge even when the applications of that new learning are not immediately apparent. Responsiveness or responding to new knowledge may be the application of acquiring that new knowledge. The crossplot analysis revealed the three clusters of elements. One cluster, shows a possible relationship with *C&C ED in LTC* Presenter, Mary After Taking *C&C ED in LTC*, Mary's Ideal Self, and Co-worker in Another Field, and confident/optimistic. This cluster suggests that *C&C ED in LTC* was beneficial in the development of the CTD confidence, as the *C&C ED in LTC* Presenter, Mary After *C&C ED in LTC* and her Ideal Self were clustered together. The second cluster shows the elements Resident You Like and Self Before *C&C ED in LTC* as having a possible relationship with optimistic and not confident. The final cluster shows A Resident You Dislike and Co-worker in

Your Field, as having a possible relationship with very confident and skeptical. Although the overall reliability and validity of repertory grids is at times an issue, (Johnson & Nádas, 2012), it does show some relationships with CTD and components of *C&C ED in LTC*. Especially the first cluster shows positive associations.

In the present study, following the *Manual for the Repertory Grid* (Feixas & Alvarez, 2000), the elements were provided by the principal investigator (PI) and the constructs were elicited from the participant Mary. The elements were provided as they consisted of relationships relevant to the research question. Although elicitation of the elements would have taken extra time and thinking effort by Mary, the provided elements may have resulted in challenges to Mary as she plotted the grid. More familiar elements that Mary could have produced may have resulted in the plotting to be easier, faster, and may have produced different results entirely. Mary did have challenges in choosing A Resident You Dislike as she indicated that there are no residents that she could think of who she dislikes. Rather it is a resident's trait or behaviour that she dislikes (e.g. aggressive).

The construct rating scale used in the present study was a 7-point scale as recommended by Johnson and Nádas (2012) because most studies use this scale and it would allow comparability with other studies. However, a 5-point scale may have been easier for Mary to use when plotting the grid. Although a rating scale "cheat sheet" was given to Mary to assist with the plotting and also verbal cues were provided by the PI, the additional two points may have provided too many response options to choose from. It is possible that the 5-point scale may have resulted in a different grid and different results.

## Chapter 6: Future Directions

This chapter presents the strengths of the study, followed by limitations and future directions.

### Strengths

There are four key strengths in this research study. The first strength was using the Repertory Grid Technique (RGT), the second strength was the mixed methodology approach, the third strength was the fact that this was a community health research project and the fourth and final strength is the Simpson and Courtney (2007) conceptual model. The RGT provided an interesting, unorthodox and simple to use approach as an alternative to using the traditional focus group methodology. The RGT was an ideal methodology for this research study as it allowed the participant to build her own grid representing her own theories or personal constructs about *Consent & Capacity: Everyday Decision-Making in Long-Term Care (C&C ED in LTC)* (Feixas & Alvarez, 2000). The grid along with the different analyses, offered a visual glimpse of the relationships identified by the participant. The RGT also provided a structured approach to working with and collecting information from the participant.

The second strength was the mixed methodology approach of using quantitative methods and qualitative methods to triangulate the data as well as capture different representations of the data. Rather than using a restrictive approach of one methodology only, the mixed approach allows for using the strengths and weakness of each approach (Bowling & Ebrahim, 2005). The California Critical Thinking Disposition Inventory (CCTDI) was used to capture quantitative data for the seven subscales of critical thinking disposition and use the qualitative

interpretation categories recommended by Facione and Facione (2014) to examine these data. The RGT resulted in a quantitative grid, plus the different analyses (focus cluster, map, and crossplot analyses). Also, the RGT captured qualitative data from the spoken conversation during grid development.

The third strength is that the study was a community health research project. Community health research is invaluable given the challenges of our health care system (e.g. funding cuts, waiting lists, over-burdened health care staff, etc.) (Canadian Institute for Health Information (CIHI), 2011; Ontario Hospital Association, 2011, World Health Organization, 1986). Using a broader community health approach emphasising health prevention and promotion rather than an individualistic, consumer-driven, treatment-focused, biomedical approach, is very important and could potentially alleviate some of these challenges (Li & Porock, 2014). Training LTC staff and evaluating the impacts of *C&C ED in LTC* is an example of a community health research project that may benefit many staff, and many residents. It also shows the value of academic centres working with community institutions. Both universities and community institutions have strengths that can be shared in community health research partnerships.

The fourth and final strength is that the study was based on the Simpson and Courtney (2007) conceptual model. This conceptual model was helpful in guiding the analysis and supporting the overall structure of the research. It assisted in identifying and focusing the study on the main variables of interest (*C&C ED in LTC* as the independent variable and CTD as the dependent variable) and the methods to evaluate these variables (CCTDI and focus groups using the RGT).

## Limitations and Future Directions

For the present study, there were limitations with offering *C&C ED in LTC* to staff, as well as limitations with the practical application of the methodology. *C&C ED in LTC* was originally intended for all staff at Lakeview Manor. However, at the time of offering the program to staff, Lakeview Manor decided that only staff volunteers would participate in the training. As a result, the sample size for the research was lower than expected during the research design. Both the principal investigator and Lakeview Manor encountered challenges that led to the delay in implementing *C&C ED in LTC* and training all staff in a group setting. Furthermore, scheduling staff time to complete training while replacement staff is provided is a complex challenge in LTC facilities. Future research could attempt to address the challenge of low sample size by expediting the research process and, if possible, expedite offering *C&C ED in LTC* to staff. Additionally, if funding is available or a research grant is available, future researchers could provide funding to Lakeview Manor to cover the cost of replacement staff. The funding may assist Lakeview Manor with scheduling staff time away from their duties of caring for residents and provide the opportunity to staff to participate in *C&C ED in LTC* and the research project. *C&C ED in LTC* also had a CD version. Perhaps using the CD for individual training rather than classroom style training may assist in some of the challenges of providing training in a LTC setting. However, a drawback of the CD version of *C&C ED in LTC* is that *C&C ED in LTC* becomes more of a transmissive learning experience rather than a social constructivist learning experience. In other words, with the CD version, staff learn in isolation rather than building knowledge in a social and collaborative fashion.

In addition to the above limitations with offering *C&C ED in LTC* to staff, there were some practical limitations in the application of the research methodology. Implementation of the post-CCTDI survey was a limitation of the research. The number of staff participants in the post-*C&C ED in LTC* group was considerably lower than the pre-*C&C ED in LTC* group. The staff social worker delivered the survey to participants and a drop box was set up at a convenient location for participants to drop off the completed survey. However, many staff participants did not complete the survey. The staff social worker needed to follow-up with staff regularly over several weeks to collect even a small sample of returned surveys. Future research could attempt to address this post-*C&C ED in LTC* methodology limitation. Perhaps with manager's support, a few minutes at the start or end of the shift could be allotted to survey completion. Another idea is for the PI to be stationed at a table by the entrance to Lakeview Manor. The PI will have blank copies of the CCTDI survey. Staff participants will see the PI and be reminded of the post-CCTDI.

Another aspect to consider regarding the low numbers of staff participants in the post-*C&C ED in LTC* group is that it is unclear the extent to which Lakeview Manor was able to implement the participant recruitment strategy. The recruitment strategy included posting flyers, information in the staff newsletter and information sent by email. It is possible that Lakeview Manor may have been unable to implement some of these strategies. Especially the important step of sending out the poster again as a reminder to participants prior to the post-test data collection. Future research could attempt to resolve this issue by designing the recruitment strategy directly with Lakeview Manor and also recommend having additional help (e.g. staff volunteer) to assist with the recruitment if that is possible.

An additional idea to consider regarding the low numbers of staff participants in the post-*C&C ED in LTC* group is that staff participants may have decided not to complete the post-CCTDI as they felt as if they were personally being evaluated rather than *C&C ED in LTC*. Although the flyer, and other information provided to the participants indicated it was *C&C ED in LTC* that was being evaluated. Future researchers need to emphasize at every opportunity that the research is a program evaluation study rather than an individual evaluation.

A second limitation in the application of the research methodology is with implementing the focus groups. Unfortunately, the three focus group sessions in the research design were not possible due to challenging weather conditions, seasonal holidays, other delays, staff scheduling and other issues at Lakeview Manor. Only one interview using the RGT was possible. During the one interview, although the grid was completed, minimal qualitative data was collected. Developing the grid took longer than the PI expected, leaving little time for collecting anecdotal information from the participant. Perhaps future research could address this challenge by having focus group sessions outside of staff work hours, consider using individual phone interviews as an alternative approach, or as already discussed, have an additional staff volunteer assist with the recruitment and research coordination, and provide funding for replacement staff.

The small number of participants, as discussed above, is a clear limitation of the study. Community health research is known for low participant numbers, as this type of research is not conducted in a closed or controlled environment (Tomkins, 2006). There are all kinds of pressures and barriers that happen in the natural course of the real world and especially in a

long-term care environment that can interfere in the goals of the research. Community health research is dependent on community-based research partners to facilitate the research process. This entails aspects such as seeking permission to conduct research on staff, staff volunteers giving up their time to support the project, coordinating timing of data collection, organizing materials, communicating with staff, providing guidance on the practical application of the research methodology, recruiting voluntary research participants, etc. Furthermore, over time, the benefit of being a research partner may appear to be less significant and the resources needed to support the research underestimated. For example, to complete the study as originally intended, in retrospect, may have required more support and endorsement of the study at a more senior level. The present study had only one staff volunteer (social worker), with an already busy schedule and demanding job responsibilities. The responsibility of assisting with the study added even more workload and the staff social worker may not have had the level of authority to influence the success of the training and research study. Although Durham Region's Commissioner of Social Services research approved the present study, perhaps regular updates, meetings and conversations with the Commissioner of Social Services and the Lakeview Manor Administrator may have assisted in the completion of the training program and the research study. Future research should consider seeking the ongoing support of someone in a leadership position.

A discussion of knowledge translation (KT) provides another perspective on the limitations of the present study. KT is the gap between those who have knowledge and the frontline workers or the users of the knowledge (Lenfant, 2003). There are four basic steps to be taken when new knowledge is to result in clinical outcome improvements (Pathman, Konrad,

Freed, Freeman, & Koch, 1996). First, policy makers, managers and providers become aware of the knowledge intervention. Second, these stakeholders must endorse the intervention (Li & Porock, 2014). Third, they must adopt the intervention into their practice. Fourth, they must adhere to the intervention in all aspects of patient care (Pathman et al., 1996). As discussed in Chapter 3, *C&C ED in LTC* was developed in a high profile and collaborative manner. Policy makers, managers and providers would have been aware of *C&C ED in LTC* and at the time, endorsed its' use. It is at the third step, adoption of the intervention when the KT process started to unravel. Other priorities at Lakeview Manor delayed this step and when this step was finally attempted, it was far less than planned during the previous endorsement step. As discussed earlier, *C&C ED in LTC* was originally intended for all staff to participate in rather than just staff volunteers. The fourth step, adhering to the intervention in all aspects of patient care cannot be completed as the previous step was not completed. Staff who did not participate in *C&C ED in LTC* obviously cannot adhere to its principals in all aspects of resident care.

Future research could address the challenges of the third step of KT by suggesting to Lakeview Manor or other LTC facility that the KT process needs to move back to the second step. Stakeholders need to review *C&C ED in LTC* again and decide whether or not to endorse (Li & Porock, 2014). It may be that the need for *C&C ED in LTC* has changed, or other interventions have filled the knowledge gap. *C&C ED in LTC* may need to be modified to match newly developed issues or the decision is made that *C&C ED in LTC* is no longer needed.

The problem of adoption may mean that the evaluation study lost its relevance to the users' needs and policy circumstances at Lakeview Manor (Li & Porock, 2014; Mitchell, 1990).

The evaluation study is closely linked to *C&C ED in LTC* and lost relevance of one may lead to lost relevance of both (*C&C ED in LTC* and evaluation study). To facilitate adoption, an evaluation may have a greater opportunity to be utilized when the choice of methodology is based on the interests of the policy actors involved. A policy community is “the collection of individuals whose primary concern is with the formulation and implementation of a set of ends (goals or missions) and means (programs or organized activities) in an area of public policy” (Mitchell, 1990, p. 110). The Interprofessional Review Group (IRG), as described in Chapter 3, was a group of multidisciplinary staff recruited at Lakeview Manor for the purpose of developing *C&C ED in LTC*. The IRG is a policy community. The role of the IRG came to an end when *C&C ED in LTC* was created. However, maintaining the IRG throughout the course of the evaluation study as well as maintaining the group for occasionally on-going monitoring may be beneficial. The evaluation criteria and methods could have been developed working in conjunction with the IRG. Further, the implementation phase of *C&C ED in LTC*, offering *C&C ED in LTC* to staff, as well data collection for the program evaluation study, could have also been done while working in conjunction with the IRG. Future research needs to make sure, if possible, that the evaluation criteria and methods are linked to the goals or missions of the IRG or the policy community.

Other ideas may be considered for future research. For research that evaluates a staff training course, in addition to pre and post CTD assessment, an additional reassessment of CTD at a later date might show further development of CTD. Attitudes may be slow to change and developing CTD may take more time than the one-hour *C&C ED in LTC* course and the time between *C&C ED in LTC* and the post-test. Forneris and Peden-McAlpine (2007) and Lamont et

al. (2010) implemented their educational interventions over a period of six months, intermittently. Future research could reassess CTD in LTC staff at a later date (e.g. six months after *C&C ED in LTC*) and add a monthly small learning group component to *C&C ED in LTC* to reinforce CTD development intermittently.

Other CTD research could consider emphasizing qualitative methodologies to detect subtle changes in CTD that may not be shown with quantitative measures. Observation of participants during *C&C ED in LTC* may show CTD being developed in a socially constructive manner. Also, future research could investigate CTD changes over time in LTC staff, or compare novice staff CTD to veteran staff CTD, or examine workforce health and well-being and possible declining CTD over time in veteran staff. A final area for future research is implementing the present study in another LTC facility to see if *C&C ED in LTC* has transferrable benefits on the CTD of other LTC staff.

The results of the present study indicate that *C&C ED in LTC* may have a positive impact on CTD in LTC staff at Lakeview Manor. Although this finding needs to be interpreted with caution in terms of generalizing to other populations, LTC facilities should consider not only continuing to provide CTD training for staff, but add CTD strategies such as questioning, small groups, role play, and debate (Simpson & Courtney, 2007). Ongoing mentoring or mentoring support for a few months after a training session may assist in continued CTD development and the use of these constructivist strategies. The benefits of offering *C&C ED in LTC* to staff in another LTC facility is unknown and as already noted may be an opportunity for future research. *C&C ED in LTC* was developed by Lakeview Manor staff for Lakeview Manor staff.

Therefore, this unique tool was developed for the unique needs of Lakeview Manor staff.

Constructivism Learning Theory suggests that knowledge or CTD development is dependent on the learners' already existing knowledge (Applefield et al., 2001). However, if the content of *C&C ED in LTC* is general in nature (e.g. applicable to LTC facilities and staff rather than just Lakeview Manor), it may be still have benefits to staff in other LTC facilities.

As a final note, the current pilot study was focused on finding what, if any, is the impact of *C&C ED in LTC* on staff CTD. As discussed, the results suggest that there may be some positive impacts to the staff. However, there was also positive impacts for the principal investigator (PI). The PI learned how to conduct a graduate community health research project. With guidance, the PI learned how to develop a research question, a research design, complete a literature review, learned what a conceptual framework is and found one for the study. The PI also completed the steps of a program evaluation and applied it to the study. The PI learned how to analyze data using SPSS and *WebGrid 5*, how to use the Repertory Grid Technique, and how to work with a thesis committee, as well as a community research partner. In conclusion, this research project was a tremendous learning experience for the PI.

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**Appendix A: *Consent & Capacity: Everyday Decision-Making in Long-Term Care***

Consent & Capacity:  
**Everyday Decision-Making in LTC**  
~An Interprofessional Perspective~



Melody Irwin MSW & Debbie DiNardo  
Lakeview Manor  
2010

1

**Make Your Music Selection**

London Philharmonic Orchestra  
"Pink Floyd- Us & Them" 

Linkin Park   
"Iridescent"

Josh Groban   
"You Are Loved"

U2   
"One"

Johnny Cash   
"One"

1. Choose a song and click on the icon in the box.  
2. To continue the presentation, click [HERE](#).  
**OR**-if you would prefer not to listen to anything click [HERE](#).

2

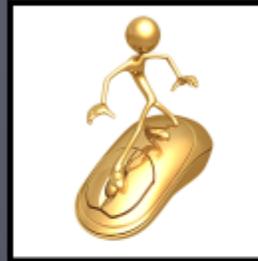
## Welcome To Your Independent Module

This learning module was developed with an interprofessional peer group at Lakeview Manor.

This group took a look at consent and capacity and what it means in everyday decision making in our long term care home.

We know, and research backs us up, that there are **big** benefits to both care providers and residents when we help our elders to live as independently and individually as possible.

It's a balancing act between all of us!



The slide show will advance automatically but you can use the menu in the corner if you need to control it manually.

3

## Thank You For Choosing To Learn More About Consent & Capacity.

- ▶ As a part of this learning module you will be asked to complete a "Reflective Thinking" questionnaire.
- ▶ Upon completion & review of your questionnaire you will be given a certificate of participation! A copy will be given to your manager to be put into your employee file.
- ▶ Some participants may also be asked to take part in a follow up survey to review the effectiveness of this program and to improve the delivery.
- ▶ If you have any questions please feel free to contact Lakeview Manor's social worker Melody Irwin (705) 426-7388 ext 5360

~Enjoy the Program!



We Make Decisions For *Ourselves* Everyday

**What kind of people do I want to spend my time with...**

**I'm hungry, what do I feel like eating...**      **Should I go to work...**

**I feel like sleeping in...**      **Should I dye my hair blue...**

**I wonder what I'm going to watch on tv...**

**Where do I want to live...**      **Who can I talk to...**

**Who can help me...**

6



We Also Make Decisions For *Residents* Everyday

What kind of people do I *have* to spend my time with...

I'm hungry, when will I be *offered* food...      *Can* I go to bed...

I feel like sleeping in, *do I have to* eat breakfast now...

I wonder if it's *my turn* to bath...      Who will *listen*...

What do I *leave behind*...      Who will *help me*...

Who can I *trust*...



8

## We've Chosen To Work With Vulnerable People.



**"Envisioning a world in which all people live in dignity and comfort"**  
~ LVM Vision

## Respect for Resident Autonomy

Respect for autonomy means, at a minimum, honoring of an individual's right to have opinions, to make choices, and to take actions based on personal goals and values.

**Choices**  
**Opinions**  
**Goals**  
**Values**



## This Is How We Respect Autonomy



**1. Following Ethical Principles**

- Promote Freedom of Choice
- Do No Harm
- Do & Promote Good
- Be Truthful
- Our Foremost Commitment is to the Resident

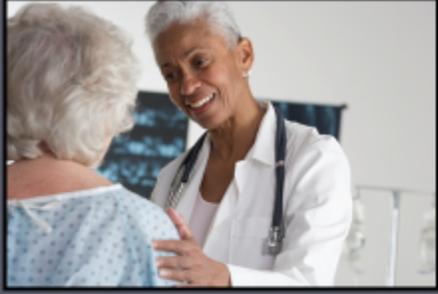


**2. Apply The "Golden Rule"**

**"Treat others as you would like to be treated."**

11

***Consent & Capacity* is simply the way we protect resident *autonomy* in everyday *decision making*.**



- We need to know who is making the decisions in a Residents life and why.
- We have a duty to ensure that an individual's right to have opinions, to make choices, and to take actions based on personal goals and values is respected.
- That's how we as professionals live up to our legal and ethical responsibilities to allow residents to participate in everyday choices.

## Know Your Responsibilities

### ~Keep Yourself Informed~

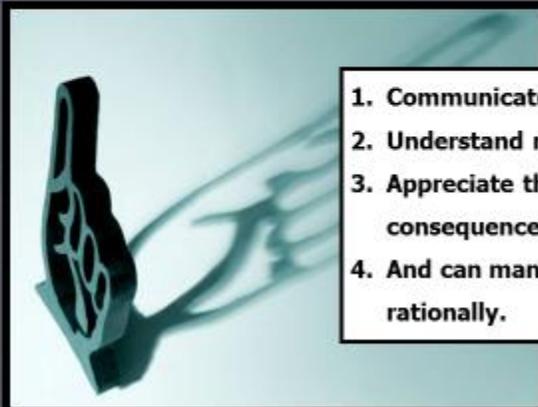
- ▶ RNAO-Registered Nurses Association of Ontario- [rnao.org](http://rnao.org)
- ▶ College of Nurses of Ontario- [cno.org](http://cno.org)
- ▶ National Initiative for the Care of the Elderly- [nicenet.ca](http://nicenet.ca)
- ▶ The Attorney General of Ontario- [attorneygeneral.jus.on.ca/english/family/pgt](http://attorneygeneral.jus.on.ca/english/family/pgt)
- ▶ Health Care Consent Act, Substitute Decisions Act, Personal Health Information Act – [elaws.gov.on.ca](http://elaws.gov.on.ca)
- ▶ Community Legal Education Ontario- [cleo.on.ca](http://cleo.on.ca)
- ▶ Geriatrics Interprofessional Interorganizational Collaboration- [rgps.on.ca/giic-toolkit](http://rgps.on.ca/giic-toolkit)
- ▶ Check With Your Professional Organization

Included in Your Learning Package!

13

## Start With Understanding Capacity

**A person is capable of making decisions if they can:**



1. Communicate choices;
2. Understand relevant information;
3. Appreciate the situation and its consequences;
4. And can manipulate information rationally.

14

## Understanding Mrs. Walksalot's Capacity

- ▶ Mrs. Walksalot is an 89 year old woman that has just moved to a new long term care home.
- ▶ Being outside is important to Mrs. Walksalot and she enjoys a walk by herself every morning before breakfast.
- ▶ Mrs. Walksalot has had a few falls in the last couple of months and she does have moments where she is confused.
- ▶ Her family is concerned that Mrs. Walksalot may get lost outside of the new long term care home. The doctor doesn't want to "take any chances" and recommends that Mrs. Walksalot only goes outside with an escort.



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## Understanding Mrs. Walksalot's Capacity



- ▶ Remember Mrs. Walksalot's family and care team can't automatically make decisions for her.
- ▶ We have to discover if Mrs. Walksalot is capable of making this decision herself.
- ▶ Can Mrs. Walksalot:

1. **Communicate her choices;**
2. **Understand relevant information;**
3. **Appreciate the situation and its consequences;**
4. **And can she manipulate information rationally.**

**"ASK" & "LISTEN"**

16

~ Look in your "Learning Package" for your personal tool!

**Communicates Choices**

+

Understand Information

+

Appreciation of the Situation & Consequences

+

Manipulate Information Rationally

## Know What To Ask:

**1. Tell me what you decided to do about the concerns your family had about you walking outside alone?**

~ Can Mrs. Waksalot share what's important to her?

~ Can she tell you what she wants?

## Know What To Listen For:



Communicates Choices

+

**Understand Information**

+

Appreciation of the Situation & Consequences

+

Manipulate Information Rationally

## Know What To Ask:

**1. Tell me more about what the doctor talked to about?**

**2. What did your family share with you about their concerns?**

~ Does she understand her physical condition?

~ Can she tell you about any of the recommendations?

~ What are the pros & the cons of the choices & options?

~ Can she come up with any other suggestions?

## Know What To Listen For:



Communicates Choices

+

Understand Information

+

Appreciation of the Situation & Consequences

+

Manipulate Information Rationally

## Know What To Ask:

1. What do you think is behind everyone's concerns?
2. Do you believe you're at risk when you are outside alone?
3. How would trying some of the recommendations help you in this situation?
3. Are there any draw backs to any of these choices or options?
4. Why do you think your doctor and family have recommended some of these options for you?

## Know What To Listen For:

- ~ Can she talk about the possible risk issues?
- ~ Can she say what would work about the plan?
- ~ Is she able to describe what could go wrong?
- ~ Does she understand other peoples perceptions about the situation?



Communicates Choices

+

Understand Information

+

Appreciation of the Situation & Consequences

+

Manipulate Information Rationally

## Know What To Ask:

1. Tell me how you reached the decision to accept (reject) the recommendations?
2. What were the factors that were important to you in reaching the decision?
3. How did you balance those factors?

- ~ Is she able to share how she made her decision?
- ~ Did she show that she weighed all the factors involved?

## Know What To Listen For:



Health Care providers like you need to know that there are two different ways of examining decision making in our society.



1. Legal Competency

2. Decision-Making Capacity

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## Legal Competency

► **Competency** is a legal term

“To say a person is incompetent indicates that a legal process has ruled that the person is unable to make decisions for themselves and has appointed a guardian like a family member or the Public Guardian & Trustee.”



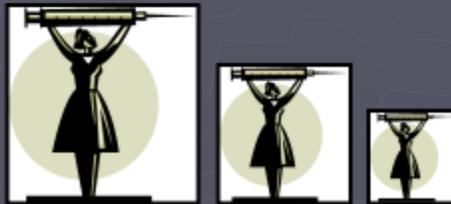
22

## Decision Making Capacity

- ▶ **Decision Making Capacity** is assessed by clinicians (You & Me!) as an *everyday* part of care

### Care Providers Need to Assess:

1. The residents **Ability to Understand**  
(factual knowledge + problem solving ability)
2. The Residents **Ability to Appreciate**  
(realistic appraisal of outcome + justification of choice)



23

### Everyday Decisions in Long Term Care

Safe use of electric wheelchairs

Expressions of Sexuality

Is it safe to go for a walk

Spending money

How are we going to do personal care today

Who can we share information with

The need for extra pain medication

Food choices

Activity choices

Co-resident interactions

Attending exercises

Referrals

24

Care team members should *not* think that residents lack decision-making capacity just because they make a decision that seems "bad".

Determining decision-making capacity involves thinking about the way the resident makes a decision, not whether the final decision is correct or wise.

**Residents have the right to not follow our recommendations and they have the *right to risk*.**

⦿ A resident who lacks the capacity to make one decision does *not* necessarily lack the ability to make all decisions.

⦿ Each type of decision requires different skills and therefore requires a separate, independent assessment.

- Safe use of electric wheelchairs
- Referrals
- Spending money
- Is it safe to go for a walk
- Who can we share information with
- The need for extra pain medication
- Food choices
- Activity choices
- Co-resident interactions
- Attending exercises
- Expressions of Sexuality
- Ability to perform personal care today



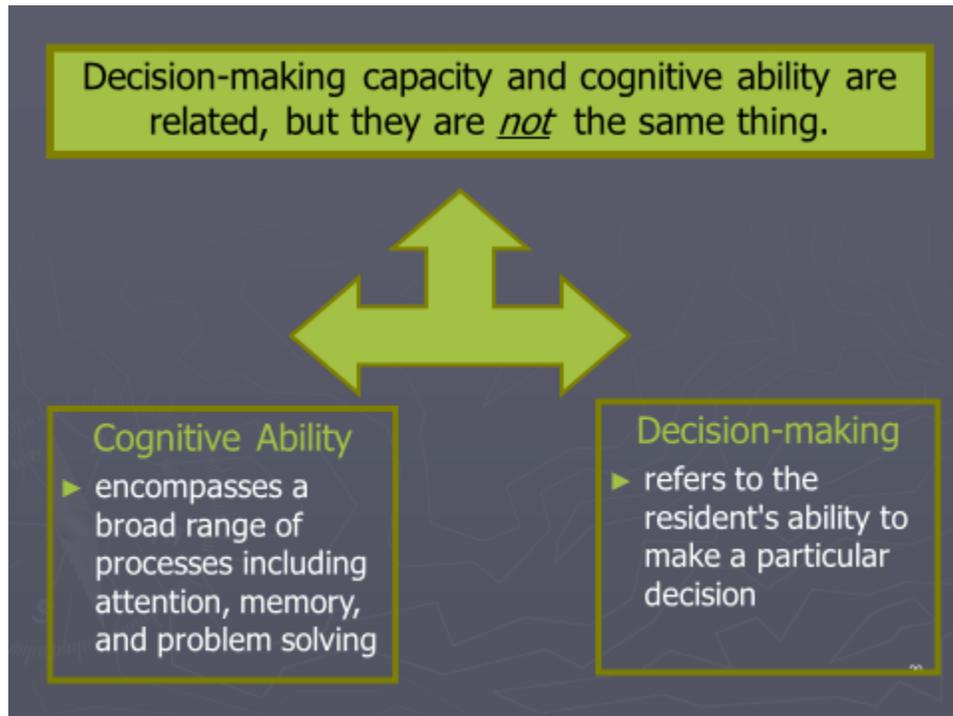
**Health care decisions vary in their risks, benefits and complexities.**

**Residents may be able to make some decisions but not others**

- Residents have opinions & wishes that should always be considered.
- A finding of “incapacity” doesn’t mean they are excluded from the decision making process.



**Residents should be allowed to participate in decision-making to the extent that they are able.**



Residents ability to make decisions can change over time or from moment to moment, especially Residents with changing medical or mental health disorders

**Delirium Is A Common Cause Of Temporary Incapacity**

**Know The Warning Signs:**



- Sudden cognitive, behavioural, physical or functional changes
- These changes fluctuate and change hour to hour
- Difficulty distinguishing reality
- Often described as irritable, fearful and aggressive
- Exit seeking
- Reduced consciousness

It takes a daily commitment to support residents to live as independently and individually as possible.

Be an everyday healthcare hero by being a resident centered champion!



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**Residents need the same, consistent information by all interprofessional team members**

**Information sharing is not necessarily a one time event.**

**Residents may need repetition, time to digest, family consultations, both verbal and written information & staff trained to bridge language and/or cultural barriers.**



## 1. Ask The Resident

**It is only through unconditional listening that we fully understand the perspective of the resident.**

**Just like you and me, their point of view has been shaped by their histories, values, wishes, hopes, fears and preferences.**



## 7 Ways To Be An Everyday Hero



## Our Interpretation

"Resident refused H1N1 flu shot."

"I nearly died when I was 5 from a polio vaccination"

## Their Perspective

## Our Interpretation

"Resident was aggressive during care today."

"I'm scared and I don't know who you are."

## Their Perspective

## Our Interpretation

"Refused to get out of bed"

"I'm tired and in pain"

## Their Perspective

## 2. Be An Option Maker

- ▶ Challenge Yourself- see the multiple options, right now, in the context of this situation.
- ▶ Resident quality of life is at stake- Be Creative.
- ▶ One approach or vision won't work for everybody- Practice Client Centered Care



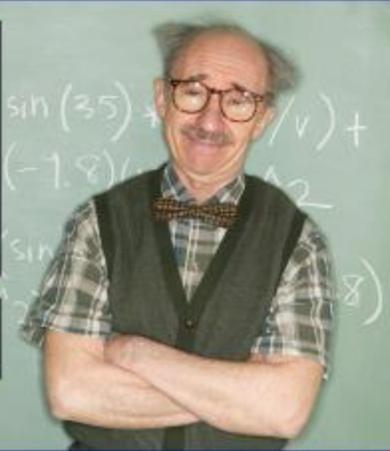
### 3. Be An Ability Seeker

**"It's About What They Can Do!"**

The bulk of suffering among our residents is because of the three plagues:

- loneliness,
- helplessness, and
- boredom

Find ways to combat these plagues during everyday decision making.



### 4. Be A Risk Taker

Making Stew	Might get sick.
Using the Stove	Fire risk.
Artists Paint	Someone might get into it.
Making Pie with Friends	It's an infection control issue.
Laundry Soap	It could be eaten.
Wearing Jewelry	It might get lost.
Going for a Walk	You might get lost.



**Try This Instead...**

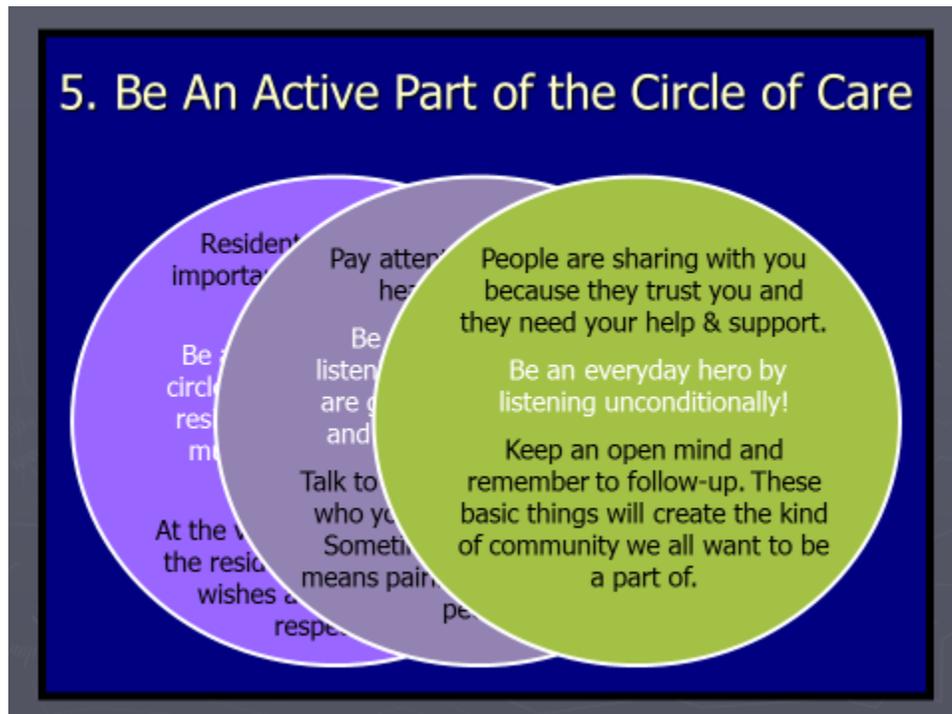
**Find A Way To Say YES More Often!**

**Think outside the box to challenge the "no's!"**

**Question the way it has "always" been done!**

**Think about how hard you would try if this was someone you love.**

### 5. Be An Active Part of the Circle of Care



Resident important

Pay attention here

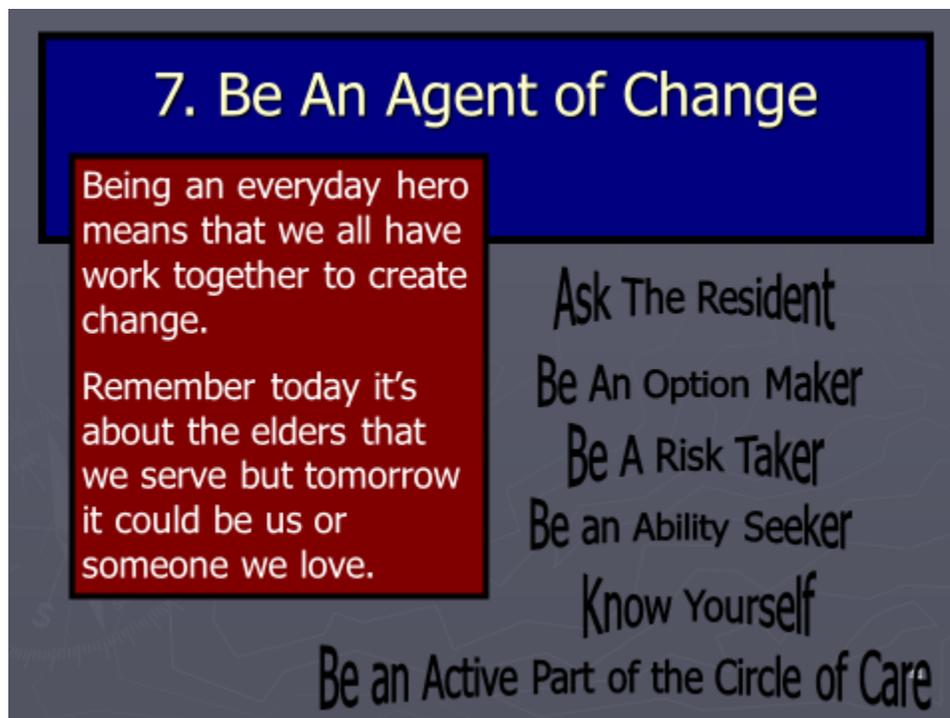
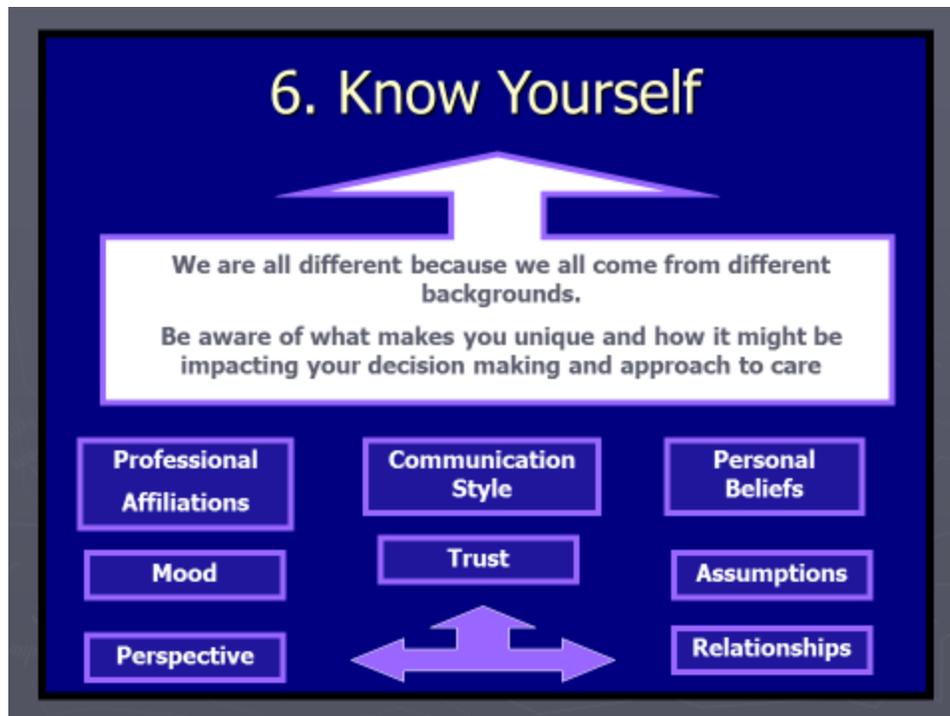
People are sharing with you because they trust you and they need your help & support.

Be an everyday hero by listening unconditionally!

Keep an open mind and remember to follow-up. These basic things will create the kind of community we all want to be a part of.

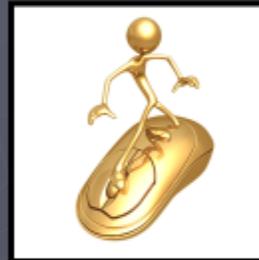
Be a part of the circle of care. Listen to residents and their families. Talk to the staff who you work with. Sometimes it means pain, but it's worth it. Be respectful.

At the very least, the resident's wishes and respect.



## Finishing Your Independent Module

1. You must return the learning CD and complete the "Reflective Learning Log" in order to complete the independent learning module.
  - Return them back to the Social Worker's mailbox in the administration wing
  - A Certificate of Participation will be delivered to you!
2. You get to keep your learning package!



← "End Show" button is over here... ;-)

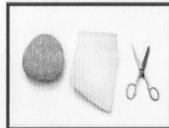
45

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## Appendix B: *Consent & Capacity: Everyday Decision-Making in Long-Term Care* Toolkit Resource



### Consent & Capacity: Everyday Decision-Making in LTC Reflective Learning Log

Participant Name:

Department:

Date:

1. What kind of everyday decisions do you help residents make?
2. Name a 2 ways that you can actively include residents in the decision-making process.
3. Write one question you might ask Mrs. Walkslot to understand her capacity to choose to walk outside alone.
4. Identify 2 ways that you can ensure that the resident's choices, opinions, goals and values are being respected in the decision-making process.
5. What could you do if you thought a residents right to make a decision was not being respected?
6. Share 2 ways that you can be an everyday day hero in your work area.

# Tool on Capacity & Consent

Ontario edition



**NICE**

National Initiative for the Care of the Elderly  
Initiative nationale pour le soin des personnes âgées

We care together

Ensemble pour le bien-être des aînés



**Advocacy Centre for the Elderly**

2 Carlton Street, Suite 701  
Toronto, Ontario, M5B 1J3  
416-598-2656

## PART I: CONSENT TO TREATMENT

### 1 CONSENT TO TREATMENT REQUIRED

*HCCA s.10*

No treatment unless:

- a. Health Practitioner (HP) of opinion person CAPABLE in respect to treatment and person has consented, or
- b. HP of opinion that person INCAPABLE in respect to treatment and SDM gives consent.
- c. if Consent and Capacity Board or court finds person capable although HP was of opinion person not capable, HP shall not treat and shall ensure treatment not administered unless person gives consent.

### 2 WHAT IS VALID CONSENT?

*HCCA s.11*

1. must RELATE to TREATMENT
2. must be INFORMED (See box on INFORMED CONSENT)
3. must be given VOLUNTARILY
4. must not have been obtained through misrepresentation or fraud

### 3 WHAT IS INFORMED CONSENT?

*HCCA s.11*

Patient or SDM (if Patient incapable) received information about:

1. nature of treatment,
2. expected benefits of the treatment,
3. material risks of the treatment,
4. material side effects of the treatment,
5. alternative courses of action, and
6. likely consequences of not receiving treatment

**PROVIDE** the information about the proposed treatment in these categories that the reasonable person would require to make decisions. The Patient or SDM is also entitled to receive responses to any further questions that he or she may have about these matters.

---

**4 WHAT IS CAPACITY FOR TREATMENT AND HOW DO YOU ASSESS THIS CAPACITY** See reverse

---

**5 WHO ASSESSES CAPACITY IN RESPECT TO TREATMENT?**

- the Health Practitioner offering the treatment (HCCA S.10)
  - Capacity Assessors (as defined by the Substitute Decisions Act)  
DO NOT do this type of assessment
- 

**6 PROCESS FOR OBTAINING CONSENT TO TREATMENT - CAPABLE PERSON**

If HP of opinion that a person is capable in respect to the treatment offered,

- HP obtains informed consent - treats
  - Patient refuses consent - HP not treat
- 

**7 PROCESS FOR OBTAINING CONSENT TO TREATMENT - INCAPABLE PERSON HCCA S.18**

1. HP of Opinion
  - that person incapable re treatment proposed
  - HP follows own College guidelines re: Rights information
  - no application to CCB is made
  - HP turns to SDM highest ranking in list for consent or refusal of consent

If HP informed

1. that person intends to apply or has applied to CCB for review of finding of incapacity , or
2. person intends to apply or has applied to CCB for appointment of representative or
3. another person intends to apply or has applied to the CCB to be appointed as representative

HP shall NOT treat and shall ensure treatment not begun:

- a. until 48 hours has elapsed since first informed on intended application to CCB and application not started
- b. until application to CCB withdrawn
- c. until CCB renders decision if none of the parties before CCB is informed of intention to appeal
- d. if HP advised of intention to appeal, until a period for commencing appeal has elapsed without an appeal being commenced (8 full days after Board hearing) or until appeal finally disposed of.

## **8 HIERARCHY OF SDMS WHO MAY GIVE OR REFUSE CONSENT - HCCA S.20**

1. Guardian of person with authority for treatment.
2. Attorney ~~in attorney~~ for personal care with authority for treatment.
3. Representative appointed by CCB.
4. Spouse or partner.
5. Child or parent or Children's Aid Authority or other person lawfully entitled to give or refuse consent to treatment in place of parent - not include parent with right of access only - if CAS or person in place of parent, not include parent.
6. Parent with right of access only.
7. Brother or sister.
8. Any other relative.

**If NO PERSON meets requirement then OPGT.**

**If CONFLICT** between persons in same category and cannot agree and claim to be SDM above others OPGT shall act as SDM

## **9 RANKING - LIST OF SDMS IS A HIERARCHY**

**Person** ranked lower on list may give consent only if no person higher meets requirements.

Exception - Family member present or contacted may consent if he or she believes :

- a. no person higher or in same paragraph exists OR
- b. if person higher exists, person is not guardian of person, POAPC, Board appointed representative with authority to consent and would not object to him or her making the decision.

## **10 REQUIREMENTS FOR SDM - HCCA S.20**

SDM in list may give or refuse consent only if he or she is:

1. capable with respect to treatment,
2. 16 unless parent of incapable person,
3. no court order or separation agreement prohibiting access to incapable person or giving or refusing consent on his or her behalf,
4. is available, and
5. willing to assume responsibility of giving or refusing consent.

## **11 PRINCIPLES FOR GIVING OR REFUSING CONSENT**

The SDM who gives or refuses consent to a treatment on an incapable person's behalf shall do so in accordance with the following principles:

1. If the incapable person expressed a wish relevant to the

treatment proposed while capable the SDM shall give or refuse consent in accordance with the wish.

2. if the SDM does doesn't know of any relevant wishes, or if it is impossible to comply with the wish, the SDM shall act in the incapable person's best interests

## **12** WHAT ARE BEST INTERESTS?

In determining Best interests the SDM shall consider,

- a. the values and beliefs that the incapable person held when capable that the SDM believes he or she would still act on if capable;
- b. any other wishes expressed by the incapable person with respect to the treatment that are not required to be followed (ie wishes expressed when incapable, wishes that are impossible to follow, wishes that are not directly relevant to the specific treatment decision)-
- c. the following factors:
  1. Whether the treatment is likely to,
    - i. improve the incapable person's condition or well-being,
    - ii. prevent the incapable person's condition or well-being from deteriorating, or
    - iii. reduce the extent to which, or the rate at which, the incapable person's condition or well-being is likely to deteriorate.
  2. Whether the incapable person's condition or well-being is likely to improve, remain the same or deteriorate without the treatment.
  3. Whether the benefit the incapable person is expected to obtain from the treatment outweighs the risk of harm to him or her.
  4. Whether a less restrictive or less intrusive treatment would be as beneficial as the treatment that is proposed.

## PART II: DECISIONAL MENTAL CAPACITY AND CAPACITY ASSESSMENT

### 1 WHAT IS DECISIONAL MENTAL CAPACITY?

- Legal Definition NOT Clinical Definition
- Different legal definition in different jurisdictions ( ie. different provinces, different countries)
- Assessment of capacity for treatment refers to a LEGAL assessment NOT a clinical assessment
- Not tested by the Mini-Mental Status Test (MMSE)
- Clinical assessments underlie diagnosis, treatment recommendations and identify or mobilize social supports
- Legal assessments remove from the person the RIGHT to make autonomous decisions in specified areas
- Legal Assessments look at Decisional Ability to make a Particular decision ( ie Capacity in respect to particular treatment, Capacity to handle property, Capacity in Respect to admission to long-term care, Capacity to make personal care decisions about shelter)

*(credit to workshop slide by Dr. Janet Munson)*

### 2 LEGAL DEFINITION OF CAPACITY IN RESPECT TO TREATMENT, ADMISSION TO CARE FACILITIES, AND PERSONAL ASSISTANCE SERVICES

*Health Care Consent Act s.4*

#### **Two step definition**

1. Able to understand the information that is relevant to making a decision about the treatment, admission, or personal assistance service as the case may be, and
2. Able to appreciate the reasonably foreseeable consequences of a decision or lack of decision

### 3 PRESUMPTION OF DECISIONAL CAPACITY

#### HCCA s.4

Person presumed to be capable for treatment, admission to care facilities and personal assistance services.

#### Exception

Person entitled to rely on presumption **UNLESS** he or she has reasonable grounds to believe the other person is incapable in respect to treatment, admission to care facilities, personal assistance services as case may be.

#### HCCA s.15

- May be capable in respect to some treatments and incapable in respect to others.
- May be incapable with respect to treatment at one time and capable at another

### 4 ASSESSMENT OF DECISIONAL CAPACITY \*

Need to assess:

1. Ability to Understand (factual knowledge + problem solving ability)
2. Ability to Appreciate (realistic appraisal of outcome + justification of choice)

#### Understand - 1st Base

- Factual knowledge: preservation of old skills & knowledge
- Has the person had learning opportunities to acquire the relevant facts:
- Updated information re: medical status, new risks or limits in ADL functions?
- Does the person understand what treatment is being offered - what it is, benefits of it, risks,

### Understanding Options - 2nd Base

- Able to comprehend information about options, risks to make an informed choice
- Able to attend to relevant stimuli, understand at conceptual level and retain essential information long enough to reach a decision
- Able to remember prior choices and express them in a predictable and consistent manner over time
- Able to problem solve around personal issues-probe specific examples

### Appreciate - 3rd Base

- Able to appraise potential outcomes of a decision
- Focus on reasoning process, explore the personal weights, values attached to each outcome
- Acknowledges personal limitations/show insight
- Decision-making is reality-based, not being affected by delusions (fixed false beliefs) or skewed by emotional states (depression, hopelessness causing an undervaluing of survival issues).

### Appreciate - 4th Base

Justification of choice:

- Shows evidence of rational (based in reality) manipulation of information - a "reasoned choice", not necessarily a reasonable choice
- Grounded in personal beliefs and values consistent with previous actions, expressed wishes, cultural or religious beliefs

*(credit to workshop slides by Dr. Janet Munson)*

**3. PRESUMPTION OF DECISION-MAKING CAPACITY**  
HCCA s.4  
Person presumed to be capable for decision-making  
Able to attend to relevant signals, understand consequences  
level and retain essential information long enough to reach  
decision  
Person entitled to rely on presumption UNLESS he or she  
is unable to understand and express their views  
Able to understand and express their views in a  
predictable and consistent manner over time  
Able to problem solve and make decisions  
examples

A pdf file of this tool is available  
on the NICE web site or you may contact  
NICE directly to order additional copies.



**NICE**

National Initiative for the Care of the Elderly  
Initiative nationale pour le soin des personnes âgées

*We care together*  
*Ensemble pour le bien-être des aînés*

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Tel: 416-598-2656 • Website: [www.advocacycentreelderly.org](http://www.advocacycentreelderly.org)

**~Keep Yourself Informed~**

- RNAO-Registered Nurses Association of Ontario- [rmao.org](http://rmao.org)
- College of Nurses of Ontario- [cno.org](http://cno.org)
- National Initiative for the Care of the Elderly- [nicenet.ca](http://nicenet.ca)
- The Attorney General of Ontario- [attorneygeneral.jus.on.ca/english/family/pgt](http://attorneygeneral.jus.on.ca/english/family/pgt)
- Health Care Consent Act, Substitute Decisions Act, Personal Health Information Act – [elaws.gov.on.ca](http://elaws.gov.on.ca)
- Community Legal Education Ontario- [cleo.on.ca](http://cleo.on.ca)
- Geriatrics Interprofessional Interorganizational Collaboration- [rgps.on.ca/giic-toolkit](http://rgps.on.ca/giic-toolkit)
- Check With Your Professional Organization





**Appendix A: Determining Patient Decision-Making Abilities when Assessing Capacity**

Ability	Probing Questions
<p><b>Ability to understand relevant information</b>                      This is the ability to comprehend basic information about a problem, its potential solutions, and the risks and benefits associated with those solutions.                      Factors influencing this ability include the patient's level of education and intelligence and how the information is presented.</p>	<ul style="list-style-type: none"> <li>• What is your understanding of your condition?</li> <li>• What options are available for your situation?</li> <li>• What do you understand about the benefits of treatment ?</li> <li>• How will the treatment help you?</li> <li>• What do you think would happen if you decide not to have treatment?</li> </ul>
<p><b>Ability to appreciate the situation and its consequences</b>                      This is the ability to recognize how a problem or solution pertains to one's own situation.                      Factors influencing this ability include the type of decision to be made and the complexity of the situation.</p>	<ul style="list-style-type: none"> <li>• What do you believe is wrong with your health now?</li> <li>• Do you believe that it is possible that this treatment/diagnostic test could benefit you?</li> <li>• Do you believe that it is possible that this treatment/diagnostic test could harm you?</li> <li>• We have talked about other possible treatments for you. Can you tell me what they are?</li> <li>• What do you believe would happen to you if you decided not to have this treatment/diagnostic test?</li> </ul>
<p><b>Ability to reason</b>                      This is the ability to consider potential solutions to problems by:</p> <ul style="list-style-type: none"> <li>■ describing how a solution would affect his or her everyday life.</li> <li>■ demonstrating how one solution is better in comparison to another.</li> <li>■ demonstrating logical thought processes in determining a choice.</li> </ul>	<ul style="list-style-type: none"> <li>• Tell me how you reached your decision to have (or not have) this treatment/diagnostic test?</li> <li>• What things were important to you in making this decision?</li> </ul>
<p><b>Ability to communicate and express a choice</b>                      This is the ability to render a clear choice for the decision under consideration. This choice should be consistent with: expressed beliefs and values, previous decisions and actions and cultural or religious beliefs.                      This ability is often preserved despite impairments in the other decision-making abilities.</p>	<ul style="list-style-type: none"> <li>• You have been given a lot of information about your condition /situation. Have you decided which option is best for you?</li> <li>• Have you made a decision about which treatment you want to proceed with?</li> </ul>



Consent & Capacity: Everyday Decision-Making in LTC

# Certificate of Participation

This award is presented to

For participation in consent & capacity continuing education.

Melody Irwin RSW  
Lakeview Manor Social Worker

Date

Lakeview Manor

## Appendix C: Poster



**Calling all Lakeview Manor staff!!!!**  
**Interested in participating in a research study?**

**Study Title:**  
**Evaluating the Impact of “Consent & Capacity: Everyday Decision-Making in LTC” (Educational Innovation) on LTC Staff**

**Study Purpose**

The purpose of this evaluative study is to determine the impact of “Consent & Capacity: Everyday Decision-Making in LTC” (educational innovation) on long-term care staff.

**What do I have to do?**

You will fill in a couple of questionnaires, and, if you want to, you can also participate in a focus group. The questionnaire takes about 30 minutes to fill in. Participation in the study is completely voluntary and your decision to participate or not and/or withdraw from this study will not affect or compromise your position at Lakeview Manor. No aspect of professional evaluation is associated with participation in this study as the study’s purpose focuses on answering the research question.

**When?**

Step one: On **<DATE>**, you will be participating in the program “Consent & Capacity: Everyday Decision-Making in LTC”. Just before the program, you will be filling in a questionnaire.  
Step two: On **<DATE>**, you will be filling in the questionnaire again.  
Step three: If you volunteered to participate, **6 weeks** after completing the program you will attend a focus group that will last about 30 minutes.

**How does this benefit me?**

You will know that your participation in the study may benefit, in the future, other staff and residents.

**What do I do if I want to participate?**

On **<DATE>**, at **<time>**, just before the program begins, go to **<room xy>** and you will be given a Letter of Invitation and Consent to sign. The Principle Investigator, Carmen Nisbet, University of Ontario Institute of Technology, Graduate Student will provide an introduction to the research project.

Carmen Nisbet	Research Ethics Board Administration/Compliance Officer
Phone: (905) 492-1044	Phone: 905-721-8668 ext. 3693
Carmen.Nisbet@uoit.ca	compliance@uoit.ca

## Appendix D: Email Memo to Managers

Dear Managers:

I am a graduate student at the University of Ontario Institute of Technology (UOIT) and I am recruiting Lakeview Manor staff to participate in my study. I am evaluating the impact of “Consent & Capacity: Everyday Decision-Making in LTC” (educational innovation) on Lakeview Manor staff. I have been collaborating with Melody Irwin, B.S.W. RSW Social Worker, over the last couple of years in preparation for this study. Staff participation in this study is voluntary and involves the completion of a questionnaire, to learn how staff think in different circumstances, on 2 different occasions (e.g. immediately before the educational innovation and 3 weeks after completion of the educational innovation). Additionally, a participant questionnaire (e.g. sociodemographic information) will be completed at the beginning of the project. The completion of these questionnaires will take approximately 30 minutes time at both occasions. Six weeks after completion of the educational innovation, staff will be invited to participate in focus groups to discuss their experience participating in the educational innovation. The study will take place starting <DATE>. Staff participation in the study may benefit, in the future, other staff and residents. For further information on this study, please feel free to contact me.

Regards,

Carmen Nisbet  
E: Carmen.Nisbet@uoit.ca,  
P: 905-492-1044

## Appendix E: Letter of Invitation and Consent Form



<DATE>



### LETTER OF INVITATION AND CONSENT

**Title of Project:** Evaluating the Impact of “Consent & Capacity: Everyday Decision-Making in LTC” (Educational Innovation) on LTC Staff

#### Introduction

The project you are being asked to participate in is an evaluative study to determine the impact of “Consent & Capacity: Everyday Decision-Making in LTC” (educational innovation) on LTC staff.

The investigators for this project is:

#### Principal Investigator:

Carmen Nisbet, Graduate Student, University of Ontario Institute of Technology (UOIT)  
(Carmen.Nisbet@uoit.ca, 905-492-1044)

#### Thesis Supervisor:

Dr. Manon Lemonde, Faculty, University of Ontario Institute of Technology (UOIT)  
(Manon.Lemonde@uoit.ca, 905-721-8668 x 2706)

You are being invited to participate in this study because you are participating in the “Consent & Capacity: Everyday Decision-Making in LTC” educational innovation. This evaluation project has been reviewed and has received approval through the UOIT Research Ethics Board (REB: # 12-026) and the Regional Municipality of Durham.

If you wish to ask questions about the study or your rights as a research participant to someone other than the researcher or if you wish to voice any problems or concerns you may have about the study, please contact the Research Ethics Board (REB) Administration/Compliance Officer, at 905-721-8668 ext. 3693 ([compliance@uoit.ca](mailto:compliance@uoit.ca)) or the Regional Municipality of Durham.

#### Participation in this study:

Your participation in this study involves the completion of a questionnaire, to learn how you think in different circumstances, on 2 different occasions (e.g. immediately before the educational innovation and 3 weeks after completion of the educational innovation). Additionally, a participant questionnaire collecting sociodemographic information (e.g. gender, age, etc.) will be completed at the beginning of the project. The completion of these questionnaires will take approximately 30 minutes of your time at both occasions.

Six weeks after completion of the educational innovation, you will be invited to participate in a focus group to discuss your experience participating in the educational innovation. The focus group session will be audiotaped and will last approximately 30 minutes.

### **Voluntary participation**

Your participation in this study is completely voluntary. If you choose not to take part in the study, you are still welcome to participate in the educational innovation, which is independent from the research. If you choose to participate in the study, you may choose not to answer any question in the questionnaires or discontinue your participation in the study at any time without having to explain and without any consequences. Your decision whether or not to participate in or withdraw from this study will not affect or compromise your position at Lakeview Manor. No aspect of professional evaluation is associated with participation in this study, as the study's purpose focuses on answering the research question.

### **Confidentiality**

Your confidentiality and anonymity are of utmost importance and will be protected at all times. Your name will not appear on any report, transcripts or publication; instead each participant will be given a code number. The list that matches names and code numbers will be locked in the office of Melody Irwin, BSW RSW, Social Worker at Lakeview Manor. The data will be stored by Insight Assessment and UOIT. Insight Assessment is a research firm that owns the rights to the questionnaire and conducts normative research using large pools of data. Insight Assessment will store the data on a password protected computer behind a protected server system. The PI will store the data on a password protected lap top computer securely stored at the PI's residence.

UOIT will retain the data for five years until April 2018 and all reports will be shredded and audiotapes will be destroyed at this time. Insight Assessment will retain the data indefinitely within their secured data system. The written report of this study will discuss only group information and no single individual will be referred to specifically or be identifiable. The findings of this study may be presented at external conferences, academic publications and posted on Municipality of Durham and UOIT websites.

### **Benefits and Risks**

Benefits for participants include knowledge that participation in the study may benefit, in the future, other staff and residents too. In addition, benefits for participants in the focus groups, is learning from participant experiences discussed during these sessions.

Benefits from the “Consent & Capacity: Everyday Decision-Making in LTC” educational innovation include increased understanding about how you think during interactions with residents and increased knowledge related to consent, capacity and everyday decision-making with residents.

The risks for participating in the study could be time involved in participating in the focus groups and filling up the questionnaires. Participation in the study may result in feelings of anxiety or inadequacy. Focus group members will be asked to keep the information provided in the groups confidential; however, it is possible that participants may repeat comments outside of the group at some time in the future. Therefore, we encourage you to be as honest and open as you can, but remain aware of our limits in protecting confidentiality. Further, due to the nature of focus groups, participant anonymity cannot be ensured.

### **Compensation**

There is no cost to participants in this study except the time spent to attend the focus group study and complete the demographic sheet and the questionnaire. Participants will not receive compensation for participating in the study.

### **Questions**

If you have any questions about the study or would like to be informed when the results will be available, please contact the investigator (please see contact information under “Introduction”).

In order to participate, please sign this consent form, and complete the attached demographic data sheet.

Your signature indicates that you have read the information provided above and have decided to participate to the research project. Please indicate by checking the appropriate box, the parts that you agree to participate:

1) Questionnaires

2) Focus groups with audio-recording

Your participation in the “Consent & Capacity: Everyday Decision-Marking in LTC” educational innovation and the evaluation process is greatly appreciated.

Yours truly,

Carmen Nisbet

---

Please note that this is a consent form, and therefore by signing this you do not waive any of your legal rights by agreeing to participate in this study.

I, (please print name) \_\_\_\_\_, have read the above information and I agree to be a participant in the study described. I understand that I may ask questions in the future.

Participant Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**Please keep a copy of the consent form**

## Appendix F: UOIT Research Ethics Board Approval



RESEARCH ETHICS BOARD  
OFFICE OF RESEARCH SERVICES

**Date:** January 21, 2013

**To:** Carmen Nisbet (Co-PI), Manon Lemonde (Supervisor)

**From:** Bill Goodman, REB Vice-Chair

**REB File #:** 12-026

**Project Title:** Evaluating the Impact of "Consent & Capacity: Everyday Decision-Making in LTC" (Educational Innovation) on LTC Staff

**DECISION:** CHANGE REQUEST APPROVED

**CURRENT EXPIRY:** October 24<sup>th</sup>, 2013

The University Of Ontario Institute Of Technology Research Ethics Board has reviewed and approved the change request. The application in support of the above research project has been reviewed by the Research Ethics Board to ensure compliance with the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans (TCPS2) and the UOIT Research Ethics Policy and Procedures.

Please note that the Research Ethics Board (REB) requires that you adhere to the protocol as last reviewed and approved by the REB.

**Always quote your REB file number on all future correspondence.**

**Please familiarize yourself with the following forms as they may become of use to you.**

- **Change Request Form:** any changes or modifications (i.e. adding a Co-PI or a change in methodology) must be approved by the REB through the completion of a change request form before implemented.
- **Adverse or unexpected Events Form:** events must be reported to the REB within 72 hours after the event occurred with an indication of how these events affect (in the view of the Principal Investigator) the safety of the participants and the continuation of the protocol. (I.e. un-anticipated or un-mitigated physical, social or psychological harm to a participant).
- **Research Project Completion Form:** must be completed when the research study has completed.
- **Renewal Request Form:** any project that exceeds the original approval period must receive approval by the REB through the completion of a Renewal Request Form before the expiry date has passed.

**All Forms can be found at** <http://research.uoit.ca/faculty/policies-procedures-forms.php>.

REB Vice-Chair Dr. Bill Goodman, FBIT <a href="mailto:bill.goodman@uoit.ca">bill.goodman@uoit.ca</a>	Ethics and Compliance Officer <a href="mailto:compliance@uoit.ca">compliance@uoit.ca</a>
--	---

University of Ontario, Institute of Technology  
2000 Simcoe Street North, Oshawa ON, L1H 7K4  
PHONE: (905) 721-8668, ext. 3693

## Appendix G: Durham Region Letter of Approval



The Regional  
Municipality  
of Durham

Social Services  
Department

605 ROSSLAND ROAD E  
PO BOX 623  
WHITBY, ON L1N 6A3

905-668-4113  
Fax: 905-666-6219  
[www.region.durham.on.ca](http://www.region.durham.on.ca)

Dr. Hugh Drouin  
Commissioner

May 3, 2013

Carmen Nesbit,  
Graduate Student, Faculty of Health Sciences,  
University of Ontario Institute of Technology

Dr. Manon Lemonde,  
Associate Professor, Faculty of Health Sciences,  
University of Ontario Institute of Technology

### Re: Evaluating the Impact of Consent and Capacity – Everyday Decision-Making in Long Term Care

---

Thank you for submitting your application to conduct your project “Evaluating the Impact of Consent and Capacity – Everyday Decision Making in Long Term Care” within the Social Services Department, Division of Long Term Care and Services for Seniors.

I am pleased that your project received approval from the University of Ontario Institute of Technology Research Ethics Board (REB File #: 12-026).

I am also pleased to notify you that our department has reviewed your application, as well as the supplemental information that was provided, and has approved the project.

I can be reached at [Darren.levine@durham.ca](mailto:Darren.levine@durham.ca) or (905) 668-4113 extension 2835 should you have any questions or wish to discuss any aspect of the project.

Thank you,

A handwritten signature in black ink, appearing to read 'Darren Levine'.

Darren Levine, Ed.D.  
Manager, Research and Innovation

cc. Laura MacDermaid, Director, Division of Long Term Care and  
Services for Seniors, Social Services Department

Dr. Hugh Drouin, Commissioner, Social Services Department

*"Service Excellence  
for our Communities"*

## Appendix H: Confidentiality Agreement



UNIVERSITY OF ONTARIO  
INSTITUTE OF TECHNOLOGY

### Confidentiality Agreement

#### Volunteer

Thank you for being a part of this study; to evaluate the impact of "Consent & Capacity: Everyday Decision-Making in LTC" (educational innovation) on LTC staff. Study completed by Carmen Nisbet. Your assistance in this study as a staff volunteer is greatly appreciated.

Your assistance with this study involves securely storing a participant list which matches names and code numbers. Further, you may be exposed to information obtained from participants, through viewing of documents or interactions with participants, which is sensitive and confidential. All information and data obtained or conversations or messages received through this study are confidential and are not to be disclosed to any third party. All participants and their activities have the right to privacy and confidentiality, therefore no information pertaining to participants is to be disclosed.

Please sign the confidentiality agreement if you agree to the above and wish to take part in this study.

Name: Melody

Date: Oct 20 2013

## Appendix I: Sociodemographic Questionnaire



### Participant Questionnaire

Instructions: Please complete the following questionnaire. For each statement, choose from one of the response options listed. Respond by filling in the bubble. Your participation is voluntary and you may choose to not respond to any of the statements. Thank you for participating.

Please indicate your gender.

- Male
- Female

Please indicate your age.

- 20 to 24 years
- 25 to 29 years
- 30 to 39 years
- 40 to 49 years
- 50 years and older

Please indicate your profession.

- Registered nurse
- Registered practical nurse
- Health care aid
- Recreation and therapy staff
- Food services worker
- Facility maintenance
- Administration
- Do not know

Please indicate your level of long-term care work experience.

- Less than 1 year
- 2 to 5 years
- 6 to 10 years
- 11 to 15 years
- 16 to 20 years
- 21 years or more
- Do not know

As part of your long-term care work, please indicate the amount of courses (e.g. CPR, First Aid, etc.) you have completed along with the other professions.

- None
- Some

- Occasional
- Frequent
- Very Frequent
- Do not know

Please indicate the highest level of education you have achieved.

- No high school diploma
- High school diploma
- Community College certificate
- Trade apprenticeship
- College diploma
- University degree
- Graduate degree
- Do not know

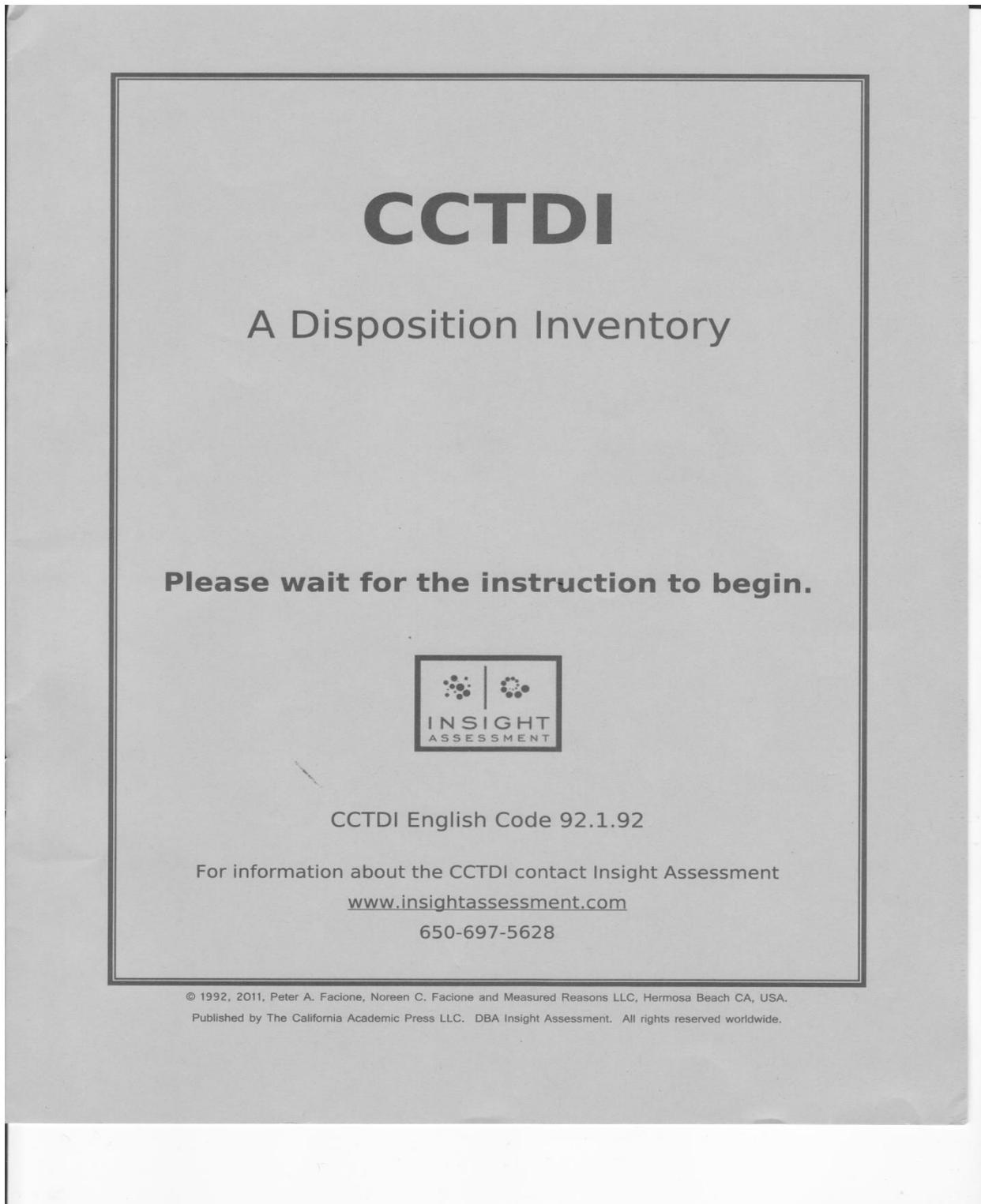
I feel the program (*Consent & Capacity: Everyday Decision-Making in Long-Term Care*) will be ...

- Not relevant to my job
- Somewhat relevant to my job
- Occasionally relevant to my job
- Relevant to my job
- Very relevant to my job
- Do not know

I feel the program (*Consent & Capacity: Everyday Decision-Making in Long-Term Care*) ...

- Is part of our monthly education days
- Provides new tools and techniques for my job
- Is a continuing education course
- Do not know

## Appendix J: California Critical Thinking Disposition Inventory



The authors of the California Critical Thinking Disposition Inventory, Facione, Facione and Measured Reasons LLC (2011), do not authorize the publication of their tool, but the members of the supervisory committee had restricted and confidential access to the tool during the oral exam.