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## Translating Face-to-Face Experiential Learning to Video for a Web-Based Communication Program

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# Translating Face-to-Face Experiential Learning to Video for a Web-Based Communication Program

## Abstract

The cultural, legal and ethical aspects of medical practice in Canada can be problematic for International Medical Graduates (IMGs) to access and learn. The professional behaviours that depend on effective communication often challenge IMGs as they attempt to enter the Canadian medical system. The Communication and Cultural Competence Program provides a complex interactive web-based environment in which IMGs can learn and practice skills required to navigate these specific elements of medical practice. The educational design of this web site is based on the theory of knowledge building (Scardamalia & Bereiter, 2003). This paper examines how video simulation is used on the web site to support this design. Experiential simulation pedagogy, typically used in high-fidelity face-to-face encounters, is analyzed. Strategies to translate this pedagogy to an e-learning format to operationalize authentic knowledge building are described. Commentaries replace live facilitation and a communication tool, the Observation Guide, allows learners to participate in the simulation. This examination provides insight into the complexity involved in creating on-line resources that extend beyond clinical content repositories, illustrating the potential for web-based programs to provide reflective and recursive learning. A wide skill set with a broad base of support was necessary to create a virtual environment with depth and authenticity. Translating the process from live simulation to a mid-fidelity digital video format allowed for deeper understanding of how the unique skills of experienced simulators impact the educational process. This multi-dimensional e-learning platform has potential for teaching complex skills in medical programs.

Les médecins diplômés à l'étranger (MDE) peuvent avoir des difficultés à accéder aux aspects culturels, légaux et éthiques de la pratique médicale au Canada et à les apprendre. Les comportements professionnels qui dépendent de l'efficacité de la communication posent des difficultés aux MDE lorsqu'ils tentent d'entrer dans le réseau de la santé canadien. Le « Programme de communication et de compétence culturelle » offre un environnement virtuel interactif complexe permettant aux MDE d'apprendre et de pratiquer les compétences requises afin d'intégrer ces éléments particuliers de la pratique médicale. Le concept pédagogique de ce site Web est basé sur la théorie de la construction du savoir (Scardamalia & Bereiter, 2003). Le présent article traite de la façon dont la simulation vidéo sur le site Web est utilisée pour appuyer ce concept. Il analyse la pédagogie expérientielle faisant appel à la simulation généralement utilisée dans les rencontres en face à face en haute fidélité. Il décrit les stratégies visant à traduire cette pédagogie en un format de cyberapprentissage afin d'opérationnaliser le concept de construction du savoir authentique. Les commentaires remplacent l'animation en direct et un outil de communication, le Guide d'observation, permet aux apprenants de participer à la simulation. Cette analyse donne un aperçu de la complexité de la création des ressources en ligne qui vont au-delà des référentiels de contenu clinique et illustre le potentiel des programmes sur Internet d'offrir un apprentissage réflexif et récursif. Une longue liste d'habiletés et un soutien important ont été nécessaires pour créer un environnement virtuel caractérisé par sa profondeur et son authenticité. La transformation du processus de simulation en direct au format vidéo numérique de moyenne fidélité a permis de mieux comprendre l'influence des compétences uniques des simulateurs expérimentés sur le processus pédagogique. Cette plate-forme de cyberapprentissage multidimensionnel possède le potentiel d'enseigner des compétences complexes dans les programmes médicaux.

## Keywords

medical communication, web-based learning, international medical graduates, cultural competence

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**Cover Page Footnote**

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The Communication and Cultural Competence (CCC) web-based program ([www.img-ccc.ca](http://www.img-ccc.ca)) was created to assist International Medical Graduates (IMGs) seeking to gain licensure in Canada.<sup>1</sup> The need for such a resource was recommended in a 2004 Report of the Canadian Task Force on Licensure of International Medical Graduates. This report cites barriers to practice for IMGs that include a lack of medical literacy skills, involving not only language deficits but also an understanding of expected professional behaviours in the Canadian medical cultural context (Crutcher & Dauphinee, 2004). Specifically, IMGs often struggle with a framework of competencies defined by the Medical Council of Canada (MCC). This framework includes the CanMEDS roles of medical expert, communicator, collaborator, manager, health advocate, scholar, and professional (Royal College of Physicians and Surgeons of Canada, 2005) and the Considerations of the Cultural-Communication, Legal, Ethical and Organizational (C<sup>2</sup>LEOs) Aspects of the Practice of Medicine (Medical Council of Canada, 2011). This complex experiential knowledge is not readily accessible through available and traditional learning resources such as books or intensive exam preparation courses often used by IMGs. To meet this need, and to provide these learning opportunities to a broad base of IMGs, including those in Canada and abroad, e-learning technologies were recommended by the Task Force as a learning platform. Web-based e-learning programs are increasingly used in medical education, particularly to teach clinical content, and are found to be as effective as traditional teaching methods (Chumley-Jones, Dobbie, & Alford, 2002; Ruiz, Mintzer, & Leipzig, 2006). However, as the literature indicates, there are few web-based resources with the breadth and depth of the CCC Program available to IMGs (Crutcher & Dauphinee, 2004; Dauphinee, 2006). An in-depth examination of the educational design, efficacies and outcomes of the website as a whole are described in a previous paper (Lax, Russell, Nelles, & Smith, 2009). This paper will explain the process and methodology of using experiential simulation pedagogy, typically employed in high-fidelity face-to-face encounters, to support the educational design of the CCC website. Details are clarified, explicating *how* this pedagogy is translated for use in a web-based environment to operationalize knowledge building and support shifts in behaviours and attitudes. In this paper, we use the term simulators rather than standardized patients or simulated patients because this term denotes that simulators portray patients, doctors, nurses, and family members.

### **Educational Design and Development**

The educational design of the CCC Program is based on the theoretical frameworks of Lave and Wenger's (1991) theory of situated learning and Scardamalia and Bereiter's (2003; 2006) principles of knowledge building. Lax, Russell, Nelles, and Smith (2009) identified five design strategies to scaffold individual online knowledge building:

1. Simulated doctor/patient video vignettes;
2. Contextualized resources providing evidence at point-of-need;
3. "Knowledge Checks" with embedded concurrent feedback;
4. "Reflective Exercises" highlighting nuances of decision making and impact on outcome;
5. "Commentaries" with expert feedback prompting deep understanding and recursive learning.

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Simulated doctor/patient videos provide IMGs with authentic opportunities to experience and practice communication skills and cultural aspects of medicine. These tacit skills and nuances are made explicit to support understanding and integration. Knowledge building principles are used to evoke recursive learning necessary for reflective knowledge work with complex content. There are three main sections of the web-based environment, each accessible independently: a language self-assessment, case-based modules, and a communication skills tutorial module. Participants are encouraged to access the language self-assessment before undertaking the other sections.

### **Language Self-Assessment**

Profession-specific literacy assessments provide more relevant information than generalized language tests, such as the Test of English as a Foreign Language (TOEFL). The website requires considerable listening and reading skills in a medical context, although many participants also use the website to improve their medical literacy. The Language Self-Assessment provides listening and reading tests that participants can use to assess the adequacy of their English language skills. There are four listening and four reading tasks, each followed by a short, timed, multiple choice comprehension test. Each task is authentic and medically relevant, although the tasks are designed so that medical knowledge is not a factor in the testing. The listening tasks are two simulated doctor-patient interviews, and two telephone conversations with another health professional; the reading tasks include excerpts from journal articles and medical charts. Tasks required to function in a medical environment are benchmarked to the Canadian Language Benchmarks at [www.language.ca](http://www.language.ca), a generic scale of communicative proficiency that is an official Canadian standard for adult English as a Second Language. Feedback provides participants with information they can use to decide if they should undertake further study on the web site. Outcomes and statistical analysis of the Language Self-Assessment section has been previously presented (Russell, Lax, & Elgie, 2008).

### **Case and Communication Skills Modules**

Five e-learning modules organized around specific themes, individual specialties and contexts were developed using a problem-based learning approach. The C<sup>2</sup>LEOs and CanMEDS roles were used to anchor the content, as shown in Appendix A. Simulated doctor/patient scenarios for each module highlight communication, ethical, and legal decision-making challenges. These challenges are presented through a sectioned narrative that provides learners with a choice of directions that the cases can take. Learners reflect upon what they have observed and are provided with choices to select a direction they might choose as the physician. In each provided choice, the learner can watch a video example of how that choice might play out and read reflective commentary. Choices are presented as less effective and more effective and thus more closely approximate practice in that there are not always clear-cut right/wrong answers (Kneebone, 2009). Embedded up-to date resources provide evidence. Learners are guided to understand the communication challenges, wrestle with the ethical decision-making and ground their decisions in sound medical practice.

Originally, case modules were designed to have a communication sidebar that would address communication challenges inherent in each case and specifically related to the C<sup>2</sup>LEOs and CanMEDS roles. By the time we finished case two, we recognized that the program needed

an entire communications module, because communication required more emphasis than we could give it within the individual cases. Furthermore, it allowed us to capture the C<sup>2</sup>LEOs that were not included in the modules and to make explicit the patient-centered clinical method (PCCM) employed in Canadian medical training and contrast it with a more doctor-centered approach. Adding a separate module was not challenging from a design perspective; it is straightforward to video tape typical communication scenarios featuring challenges such as breaking bad news. However, our challenge was to unpack and translate teaching and learning strategies in a web-based program, in a similar fashion to what we are able to provide in a live teaching setting, the details and methodology of which are explained below.

### **High-Fidelity Face-to-Face Simulation Teaching**

In face-to-face formative teaching settings focused on communication skills, our approach includes integrating simulation, guided facilitation, and reflection. It is designed to scaffold knowledge building and support recursive learning to improve performance. Learners in these sessions range from first year medical students to highly experienced physicians in continuing education who have various and diverse backgrounds. These high-fidelity face-to-face simulations are one-time interactive events. The approach is experiential and immersive; the learning results from the doing.

Typically, simulators learn the patient's story, usually an unscripted scenario with certain markers, e.g. contextual details, medical details, behavioural affects, and questions the patient might ask. The focus for the simulator is not on providing a standardized delivery (so necessary in high stakes licensing exams to give all participants a fair chance) as it is on being able to respond flexibly to what a learner needs in the moment related to the goal of the simulation session (McNaughton, Ravitz, Wadell, & Hodges, 2008).

A simulator might work one-on-one with a learner, in a small or large group with facilitation provided by a simulator/educator and/or a medical clinician. The approach is learner-centred. Facilitators encourage learners to identify and address their learning gaps. Occasionally a facilitator will move into a more directive role in terms of guiding the process but from the point of view of asking rather than telling. Many learners can become frustrated with this approach because they perceive there is only one right way to do things and want to be told how and what to do (Hall, Keely, Dojeiji, Byszewski, & Marks, 2006; Kneebone, 2009; Pilotto, Duncan, & Anderson-Wurf, 2007). In contrast, a learner-centred approach focuses on the individual experience and the knowledge building process. In this approach, there are often “time-outs”, stops and starts in the interaction, determined by the learner or the facilitator, to allow for individual responses, discussion, reflective analysis, and opportunities to redo portions of an interview and apply new discoveries.

An invaluable part of a simulator's contribution to the learning process is the immediate feedback that he/she provides from his/her perspective as the patient. Simulators are trained rigorously to provide feedback that is specific - based on what they heard or saw - and to link this observed behaviour to how it affected them (The University of Toronto, Standardized Patient Program, 2007a). In a systematic review of the literature on feedback by simulated patients, this approach is recognized as being effective (Bokken, Linssen, Scherpbier, van der Vleuten, & Rethans, 2009).

In order to structure feedback we employ the University of Toronto/SPP observation guide, as seen in Appendix B. It was developed through many years of communication teaching

experience. (Two of the authors of this paper, Nelles and Smith, have been closely involved in its creation). This tool addresses some of the challenges inherent in feedback delivery of communication skills that can cause confusion among learners and educators. Such confusion is often related to inconsistencies in understanding and use of terminology and methodology (Haq, Steele, Marchand, & Seibert, 2004). The observation guide can be considered a knowledge artifact that represents the current state of ideas in the field (Scardamalia & Bereiter, 2006). Communication concepts have been distilled into a concrete, one-page tool, with an attendant glossary. Learners, simulators, and educators are oriented to it in order to create common understanding about the content of the feedback and to structure the process of the feedback delivery.

Through the observation guide, simulators link specific observable behaviour - what they saw or heard at a particular moment in the interview - to specific communication skills on the observation guide and the resulting perceived impact on them. The observation guide also becomes a concrete tool for learners to benchmark their performance against that of their peers. Although it looks like a binary done/not done checklist, the guide is multi-layered in its complexity and fosters discussion from several perspectives. There is no one correct way to interview a patient and there is no one correct way to use the guide - appropriate use is context dependent. Furthermore, each time a learner uses the guide, he/she will have a completely different experience.

Our challenge was to translate this dynamic, interactive face-to-face process into a web-based format to be used by learners working independently. Considerations included:

- creating simulations to meet learner needs; and
- providing specific feedback to encourage and support reflection and improvement in skills.

### **Translation to Mid-Fidelity Web-based Video Simulations**

In order to translate high fidelity face-to-face simulation methodologies to a mid-fidelity video format, we considered case design, style of simulation, characteristics of simulators, and various simulation formats.

Mid-fidelity video simulations illustrate how the complexity of the verbal and non-verbal language shapes communication, often in a non-linear, non-formulaic manner. Our goal was to conceptualize behaviour and situations that would both present the necessary material (the C<sup>2</sup>LEOs, CanMEDS roles, medical content, and communication learning objectives) and maintain the improvised, immediate, and authentic feeling of a face-to-face encounter. Simulations ranged from being improvised to being fully scripted, prior to digital video production. In the case of fully scripted scenarios, the simulator learned the structure of the script such as narrative details of the role, content markers, and affects without memorizing the dialogue. Then, the interaction was improvised to enhance authenticity.

We selected simulators who were able to calibrate their performances in order to imbue each of the narrative directions with precision and veracity. Simulators, chosen from the University of Toronto's Standardized Patient Program, were skilled actors with on-camera experience. They also needed to have an extensive background in medical simulation because this gave them an acquired understanding of behaviours and skills common to this milieu. This dual expertise allowed us to use them, not only as simulated patients, but also as simulated physicians and others who could move in a believable manner from a psychiatric interview, to a

post-operative interview, to an encounter between colleagues because they were familiar with the culture and structure of these different domains.

In addition to the case-based video scenarios used throughout the website, there are two carefully nuanced “core” interviews in the Communication Skills Module. These core interviews illustrate and distinguish a patient-centred from a doctor-centred approach. Again, the verisimilitude of these videos relies upon the knowledge, skills and experience of the simulators. Our intention was not to make the physicians in the more doctor-centred interviews appear to be unprofessional or incompetent or to suggest that a doctor-centred approach is wrong. Rather, learners are directed by a Commentator video and through text to observe how a doctor’s behavioral choices affect the outcome of an interview. In addition, vignettes are embedded directly within text to provide immediate contextualized examples of interviewing situations. A further number of video vignettes illustrating challenging situations such as breaking bad news, anger, the talkative patient, sexual history taking, and interprofessional communication feature contrasting doctor-centred versus patient-centred approaches for learner comparison. Transcriptions of the video dialogue are provided beside the video screen for learners with less advanced technology or language skills. The flexibility of the e-learning platform also enabled us to include testimonial videos from doctors and individuals, particularly in the Aboriginal Health Module, providing a first-hand perspective that complemented the simulations. Finally we used video in a more traditional way with the commentator who functions as an expert voice and mentor.

### **Formative Feedback Scaffolds for Reflection on Practice**

High fidelity learner-centred feedback strategies employ facilitation, specific feedback tools, and debriefing strategies as part of the process. We had to create a structure that would allow us to include these elements in a mid-fidelity simulation format.

The core interviews in the Communication Skills Module are scaffolded to support progressive knowledge building and deep understanding of nuanced and complex aspects of practice. The scaffolds include a commentator, the observation guide, application commentaries, and interpretative commentaries. Each of these scaffolds is designed to provide embedded formative feedback and opportunities for reflection (Lax, Russell, Nelles & Smith, 2009; Scardamalia & Bereiter, 2003; Scardamalia & Bereiter, 2006; Schön, 1987). They can be seen as “layers” of cognitive support to direct knowledge building and situated learning.

The module begins with a video introduction from the commentator. In a live setting, the commentator might be a clinician or a simulator/educator providing theoretical communication content to prepare learners for a simulated session. As in the case modules, this commentator provides mentorship throughout the website and orients learners by providing definitions, an historical account of the evolution of doctor-patient communications, and an explanation of the teaching method that will be used.

In the next layer, learners are introduced to the observation guide. In a face-to-face setting, time would be allotted for a simulator/educator to provide similar orientation. In the CCC Program, learners click on interactive buttons to hear audio descriptions of various facets of the guide. Another link allows them to pull up an attendant glossary with specific examples (The University of Toronto, Standardized Patient Program, 2007b).

In the third layer, learners fill in the guide while watching “Core Interview 1”. This approximates the first time learners work with the guide in a face-to-face setting. They use this

initial response to the interview as a way to benchmark their first perceptions and as a point of comparison with future experiences.

Now learners come to the fourth layer – they watch “Core Interview 1” again with an application commentary that functions in much the same way as a live simulator and facilitator would in a face-to-face encounter. In the place of immediate feedback from a simulator, the discourse is micro-dissected using the observation guide as the point of reference, identifying behaviour rather than interpreting it. As in a live, learner-centred environment, reflective questions are posed to stimulate critical assessment. At any time, and as many times as they wish, learners can review the video segment as they read the commentary using embedded links identified by a time code to isolate the identified moment within the interview.

An example of the application commentary that illustrates the interaction between the video vignette and the written commentary is provided below. To experience this aspect of the program, click on the video links then read the accompanying text:

The first 16 seconds sets the tone for the whole interview (see video clip 1 by [clicking here](#)).<sup>2</sup> The doctor is dressed professionally in a white lab coat, carrying the chart note on a clipboard. She obtains the patient’s name, and notes she is new to the clinic. She does all this pleasantly, with a smile and “Nice to have you here”.

Then she asks two very specific questions: “How old are you?” and “Are you married?”

- What do you think of these questions, used at this point in the interview?
- What impression might such questions have on a patient who does not know the doctor?
- Did you note the doctor’s eye contact and non-verbal style on your observation guide?

Next the doctor begins with a commonly used, **open-ended question**... “Tell me why you’ve come in?” She **repeats** the patient’s words, to **clarify** what “not quite right” means, and elicits that the patient’s “chief complaint” is of fatigue and dyspnea. As the patient (Victoria) starts to explain her symptoms, the doctor **interrupts** several times, beginning with “How long has that been going on?” (see video clip 2 by [clicking here](#))

- What do you think the purpose of these interruptions is?
- What seems to be the patient’s response?
- How did you assess the presence/absence of **silence** as an active listening style in **gathering information?** (“Medical Communication Skills”, 2007)

Altogether, this dissection captures the first 39 seconds of the interview, pointing out details of nuances in communication. Note how terms such as “open-ended question” are bolded. These are contained in the observation guide and bolding them further reinforces recognition and understanding with specific contextualized examples.

The fifth layer, the “Interpretive Commentary”, offers reflection on reflection of practice. It mirrors the debriefing that learners might undergo after a live teaching session. The commentator, now the expert voice, draws attention to the bigger picture - principles or patterns

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<sup>2</sup> The link will take you to the abstract page for this article. To access all of the video clips please click on their respective links in the “Associated Files” section near the bottom of the abstract page.

that emerge from the simulations, referring to the patient-centred model, and pointing out specific points where the doctor-centred model differs. Because it is interpretive, some assumptions and judgments are made. The observation guide is again used as a point of reference in the interpretive commentary as in the following example:

By failing to **integrate the patient's illness experience** into the biomedical hypotheses, the doctor misses important data, and the **quality of the data** she obtains is uncertain. Whether intended or not, this is a manifestation of a lack **of respect for the patient's point of view**. There are several other points at which the patient expresses her major concerns. At 3'15" she says "I feel so helpless when I'm out of breath." At 4'10" she says "my poor husband."

- Why does the doctor ignore or miss these important cues?
- Is her mind exclusively on the biomedical agenda—the various diagnostic hypotheses?
- Where is she looking? Would she recognize the patient's non-verbal cues?
- Do her responses sound like she has actually heard the patient, or are they perfunctory?

Look at video clip 3 ([click here](#)) for additional examples of failure to actively listen and attend to the patient's cues. She does try to **legitimize** the patient's feelings of concern for her husband with: "It's not your fault ... you're doing the best you can." (see video clip 4 by [clicking here](#)) ("Interpretive Commentary", 2007)

Once learners have gone through this process for Core Interview 1, they then watch the same doctor and patient go through the interview again in Core Interview 2, this time with the doctor demonstrating a more patient-centred approach. On the surface, the differences may seem subtle but there are significant contrasts in the physician's communication behaviour and the resulting effect on the patient.

The process of going through Core Interview 2 has as many layers as that for Core Interview 1. And, learners can navigate even more deeply by comparing the two interviews once they have gone through the individual interviews. Again and again, the message is that micro-decisions and responses by the doctor influence outcomes.

## Discussion and Implications

Our experience both in face-to-face simulation and in the production of digital video simulations for medical education allowed for the creation of a virtual situated learning environment. Some discoveries learned through this process are presented here.

Creating a complex online learning environment poses many challenges and requires a broad set of conceptual and practical skills (Chumley-Jones et al., 2002). The translation of live simulation to mid-fidelity digital video simulation was integral to the early stages of development, requiring graphs, storyboards, and specific nomenclature for the various sections and layers as illustrated in Appendix C. A great deal of time and focus was needed to keep all the details in order and a balance of multiple skills on many different levels was needed to capture the right tone. Occasionally this required rewriting, reshooting, and re-editing in order to achieve nuances that would provide the intended authentic situated learning environment.

Replicating the richness of medical culture required intense collaboration and input from many individuals. From the specific expertise of a family doctor, to the pedagogic knowledge of a design researcher, to the technical proficiency of a computer programmer, to the special skills of a simulator, to the testimonial of a diabetes nurse or a First Nations Elder, the development of this website not only mirrors the complexity of the educational design but also of the diverse and inter-dependent medical culture it seeks to replicate.

In a web-based format, we lost the flexibility inherent in the direct interactivity of a live setting. However, we gained the ability to provide and to micro-dissect many visual and auditory elements, allowing learners to examine and reexamine concepts in their own time and at their own pace.

The translation of live to digital web-based media has allowed us to define the simulation process more clearly and to understand more fully how the unique skill set of simulators impacts and enhances the educational process. Involvement in this type of project as co-creators also has given us a better understanding of our role as simulation educators.

Our previous research examined the relationship between participation patterns and educational design strategies used in the CCC Program - outcomes indicated the five design strategies scaffolded individual web-based knowledge building (Lax, Russell, Nelles, & Smith, 2009). In this paper, we have described the translation of high-fidelity face-to-face simulations to mid-fidelity web-based simulations. The novel clinical videos and multiple layers of embedded feedback scaffold online learning design. IMGs lacking access to complex, real world practice are thereby provided with opportunities for review and recursive knowledge building through mid-fidelity web-based simulations and associated scaffolds.

Further research is required to assess the impact of web-based video simulation and accompanying feedback on IMGs' performance. The CCC Program may also be useful to Canadian trained residents and practitioners interested in improving their communication skills and reviewing the C<sup>2</sup>LEO objectives and CanMEDS roles.

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## Appendix A

### CCC Program, Case 1, Content Grid Based on the C<sup>2</sup>LEOs and CanMEDS Roles

*CCC Content Grid – Case 1. Specialty: Family & Community Medicine. Context: Office*

C <sup>2</sup> LEOs	CanMEDS Roles					
	Communicator	Expert	Collaborator	Manager	Health Advocate	Scholar Professional
Confidentiality	√	√			√	√
Consent	√	√				√
Truth-telling	√	√				√
Resource Allocation						
Research Ethics						
Statutory Requirements						
Medical Records		√	√	√		√
Community Services		√	√		√	√
Interprofessional	√		√	√		√
Liability/Negligence	√			√		√

Royal College of Physicians and Surgeons of Canada, CanMEDS Framework, 2005; Medical Council of Canada, C<sup>2</sup>LEOs, 2011

## Appendix B

### CCC Program Web-based version of the Toronto/SPP Observation Guide

#### The Observation Guide

Click on the Play  buttons to hear an audio description of each of the three sections.

If you would like to read along with the audio, click here. 

# Toronto/SPP OBSERVATION GUIDE

Glossary

> TECHNIQUES	What you use: specific tools used to express styles & attitudes		
	<input type="checkbox"/> Addressing disagreements <input type="checkbox"/> Asking permission <input type="checkbox"/> Bridging <input type="checkbox"/> Clarifying <input type="checkbox"/> Explaining why questions are being asked <input type="checkbox"/> Facilitating <input type="checkbox"/> Linking	<input type="checkbox"/> Negotiating <input type="checkbox"/> Normalizing <input type="checkbox"/> Paraphrasing <input type="checkbox"/> Prioritizing <input type="checkbox"/> Qualifying <input type="checkbox"/> Quantifying <input type="checkbox"/> Reflecting	<input type="checkbox"/> Reiterating <input type="checkbox"/> Repeating <input type="checkbox"/> Summarizing <input type="checkbox"/> Using the patient's language <input type="checkbox"/> Validating
> STYLES	How you do it: behaviors or how attitudes are expressed		
	<p><b>LISTENING STYLE: Active</b></p> <input type="checkbox"/> Responds to verbal and non-verbal cues <input type="checkbox"/> Uses silence and interruptions appropriately <input type="checkbox"/> Checks in <p><b>QUESTIONING STYLE: Appropriate use of</b></p> <input type="checkbox"/> Open-ended <input type="checkbox"/> Closed-ended <input type="checkbox"/> Directive <input type="checkbox"/> Multiple <p><b>NON-VERBAL STYLE: Appropriate</b></p> <input type="checkbox"/> Facial expression <input type="checkbox"/> Eye contact <input type="checkbox"/> Body language	<p><b>SPEECH PATTERN</b></p> <input type="checkbox"/> Adjusts to patient's level of understanding <input type="checkbox"/> Pacing is appropriate to context <input type="checkbox"/> Vocabulary is appropriate to context <input type="checkbox"/> Jargon is appropriate to context <p><b>ORGANIZATION</b></p> <input type="checkbox"/> Flexibility (follows patient's cues, not rigidly bound to predetermined plan) <input type="checkbox"/> Appropriate focus and use of time <input type="checkbox"/> Gathers adequate quality/quantity of biomedical information <input type="checkbox"/> Gathers adequate quality/quantity of psychosocial information <input type="checkbox"/> Actively integrates biomedical and psychosocial information to create a complete context	
> ATTITUDES	Who you are: point of view; informed by values, culture & environment		
	<p><b>BEING EMPATHIC</b></p> <input type="checkbox"/> Understanding the patient's experience <input type="checkbox"/> Acknowledging this understanding to patient <input type="checkbox"/> Checking in with patient to clarify understanding <p><b>BEING HONEST</b></p> <input type="checkbox"/> Telling the truth <input type="checkbox"/> Admitting a lack of knowledge	<p><b>HAVING SELF-AWARENESS</b></p> <input type="checkbox"/> Being non-judgemental <input type="checkbox"/> Being aware of assumptions <input type="checkbox"/> Being open-minded <p><b>PROFESSIONAL DIALOGUE</b></p> <input type="checkbox"/> Encouraging discussion and feedback <input type="checkbox"/> Seeking common ground <input type="checkbox"/> Respecting patient's viewpoint <input type="checkbox"/> Seeking to put patient at ease	

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*Note:* The CCC Web-based interactive version is based on the original paper-based version of the Toronto/SPP Observation Guide (2007b). Reprinted with permission.

## Appendix C

### CCC Program Master Flow Chart – Case 1

