

## **Appendix 1 (part 1 of 2):** Semistructured interview for study of renal QI-DTPs (quality indicator drug therapy problems), version 2.0, December 6, 2016.

### **Introductory script**

Hi, this is Alice. I'm a pharmacy resident and I'm working with Will Nevers on the renal pharmacist quality indicator project. How are you? Well, let's get started. I will now begin recording if that's OK with you and I won't be using your name from now on. You are participant \_\_\_\_\_ . Thanks very much for agreeing to participate. Did you get a chance to view the PowerPoint presentation about the project? Do you have any questions? This interview should take approximately 30 minutes. If you need to leave, just let me know. If you don't understand a question, please ask and I will rephrase the question in a different way. All of your information will be anonymized and kept confidential and not shared with anyone outside of our investigator team. We are recording this interview so 1 investigator can transcribe the audio into text for analysis. No identifying information is being transcribed from the audiotape.

### **Demographic Information:**

Participant identifier: interviewer to complete this information verbally at start of interview. Provinces were coded A = BC; B = AB; C = SK, D = MN, E = ON, etc.

1. How many years have you been a pharmacist?
2. How many years have you been working as a renal clinical pharmacist?
3. What area of nephrology do you primarily work? (e.g., HD unit, CKD clinic, PD clinic, etc.)
4. What education level do you have in pharmacy?
5. Do you have any conflicts of interests to declare?

### **Renal QI-DTP Questions:**

1. **Before listening to the voiceover presentation, were you aware that there are Canadian renal pharmacist quality indicators formally referred to as "Quality Indicator Drug Therapy Problems"? We'll call these "Quality Indicator Pharmacist Interventions" moving forward.** Can you explain a little? Do you know what the objectives of creating these were? (**Domain: Knowledge, Construct: Knowledge**)

#### **Probing Questions**

- Can you think of a few (or all of the) Quality Indicator Pharmacist Interventions that a renal pharmacist can make? (**Domain: Knowledge, Construct: Procedural knowledge**)
  - How would you use your knowledge of renal pharmacist Quality Indicator Pharmacist Interventions in your practice? (**Domain: Knowledge, Construct: Procedural knowledge**)
2. What would **stop you** or **hinder you** from resolving these renal QI-DTP in your patients? In other words, what do you think are the barriers for you to make these interventions in your patients?

#### **Probing Questions**

- **Take a brief look at the list of Quality Indicator Pharmacist Interventions: Have you been trained to be able to perform these interventions?** Can you explain how, in the past, you have learned who to intervene on and how to intervene in your patients with renal disease? Prompt: Beyond formal university/residency instruction? (**Domain: Skills, Construct: Skills**)

- **Can you give some examples of how you think you can best learn about the Quality Indicator Pharmacist Interventions? (Domain: Skills, Construct: Skills)**  
Prompts: Do you learn best attending presentations? Do you like to get together at meetings to discuss the learning topic? Do you like printed tools such as algorithms or pocketcards? Do you like reminders? Do you like to see how well you are performing a task, such as IV to PO antimicrobial stepdown over time so you can look to improve?
- **How difficult is it/would it be for you to incorporate the renal QI-DTPs into your practice? How would you incorporate knowledge of these? Why is it difficult (or easy)? What would help you to overcome these problems? (Domain: Beliefs about capabilities, Construct: Perceived behavioural control)**
- **Do you think that you currently have the skills required to resolve all of the renal QI-DTPs? Can you explain why or why not? (Domain: Skills, Construct: Skills assessment)**
- What knowledge and skills do you think you need to incorporate all of the renal QI-DTP into your practice? (**Domains: Knowledge and Skills, Construct: Skills development**)
- What do you think your role is in resolving the renal QI-DTPs for your patients? Please explain why you think this. Do you think pharmacists can be leaders in ensuring that patients are receiving evidence-based best drug therapy? What other health professionals do you consider leaders in this? (**Domain: Social/professional role and identity, Constructs: Professional role/leadership**)
- How confident are you in your current ability to incorporate the renal QI-DTPs into your practice? Why do you feel that way? (**Domain: Beliefs about capabilities, Construct: Self confidence**)
- **What do you see as the downsides of incorporating the renal QI-DTPs into your practice?** Prompts: Explain the downsides to your patient? To you? (**Domain: Beliefs about consequences, Construct: Outcome expectancies**)
- **If you encountered a lot of resistance when attempting to resolve a renal QI-DTP, such as from physicians, would you be more inclined to stop incorporating the renal QI-DTPs into your practice? Why? (Domain: Intentions, Construct: Stability of intentions)**

Nevers W, Ratcheva A, Boutin K, Gorman SK, Slavik R, Lesko N. Barriers to and enablers of implementation of high-value interventions by renal pharmacists: a qualitative study informed by the Theoretical Domains Framework. *Can J Hosp Pharm.* 2020;73(3):177-85.

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- **Would you say your decision whether to incorporate renal QI-DTP into your practice is/could be influenced (positively or negatively) by your colleagues?** Physicians? Supervisors? Patients? Others? How? (**Domain: Social influences, Constructs: Social pressure/group conformity**)
  - **How would you rank the activity of resolving renal QI-DTP for your patients in terms of priority tasks for you to perform (high, medium, low)?** Can you explain why you think that? (**Domain: Goals, Construct: Goal priority**)
3. What would help you to **incorporate or better incorporate** the renal QI-DTPs in your practice?
- Probing Questions**
- **What resources do you think you/renal pharmacists need to optimally incorporate renal QI-DTPs into practice?** Prompts: Human resources? Material resources? Educational resources? Reminders? Time? Patient awareness/education? (**Domain: Environmental context and resources, Construct: Resources**)
  - **Are there current procedures or processes in your area of work that encourage you to resolve renal QI-DTPs?** If yes, what are they? (**Domain: Behavioural regulation, Construct: Action planning**)
  - **How do you learn how to promote optimal medication use in your practice?** Can you give some examples of how you have learned about appropriate medication use in the past (outside of school)? (**Domain: Skills, Construct: Skills development**)
    - Do you learn best attending presentations? Do you like to get together at meetings to discuss the learning topic? Do you like printed tools such as algorithms or pocketcards? Do you like reminders? Do you like to see how well you are performing a task, such as knowing the percentage of eligible patients under your care who are receiving optimal drug therapy for a particular condition?
- **What do you see are the benefits of incorporating the renal QI-DTPs into your practice?** Explain the benefits to your patient? To you? (**Domain: Beliefs about consequences, Construct: Outcome expectancies**)
  - **Do you think the benefits outweigh the downsides of incorporating the renal QI-DTPs into your practice?** (**Domain: Beliefs about consequences, Construct: Characteristics of outcome expectancies**)
  - **Would you be more likely to incorporate the renal QI-DTPs into your practice if you had the support of physicians? What about support of your colleagues? Supervisors/management team? What about pharmacists? What type of support would you want?** (**Domain: Reinforcement, Construct: Reinforcement**)
  - **In what circumstances would you be triggered to incorporate (or think about incorporating) the renal QI-DTPs into your practice?** Maybe they have another patient that they resolved a QI-DTP for recently? etc. (**Domain: Memory, attention and decision processes, Construct: Decision making**)
4. Is there anything else that you feel is important that we haven't yet covered?

## Appendix 2: Coding guide for interview transcripts.

Coding employed directed content analysis using the Theoretical Domains Framework (TDF)

- 1) Objective of coding is to identify:
  - a) What we conclude about each TDF domain (is it a barrier or facilitator for pharmacists using renal QI-DTPs?)
- 2) Where multiple domains are raised by interviewees within the one utterance, judge what is the main message of the utterance and code based on this
- 3) When uncertain of domain, go with first hunch and asterisk quote in table to show uncertainty and highlight for team discussion
- 4) If after discussion, uncertainties remain then utterance to be 'double-badged' within more than one domain.

TDF Domains	Coding Guide
<b>Behavioural regulation</b>	a) Ways of doing things that relate to pursuing and achieving desired goals, standards or targets (e.g., courses/appropriate structure could influence the use of renal QI-DTPs by pharmacists). b) Translating intention into action (e.g., at the individual level – action planning; at the organizational level – more specific guidelines related to pharmacists using renal QI-DTPs).
<b>Social influences</b>	External pressure from other people/ views of other professions, patients that influence the pharmacist's behaviour about how to utilize renal QI-DTPs.
<b>Reinforcement</b>	Whether any financial/non-financial incentives or positive/negative consequences influence pharmacist's behaviour on using renal QI-DTPs.
<b>Environmental context and resources</b>	Factors related to the pharmacy setting/ environment/person; environmental interactions that influence pharmacist behaviour about using renal QI-DTPs (e.g., lack of time).
<b>Beliefs about consequences</b>	Perceptions about outcomes, and advantages and disadvantages of using renal QI-DTPs.
<b>Beliefs about capabilities</b>	a) Perceptions about her/his own competence/self-confidence in performing renal QI-DTPs (e.g., very confident in performing activities). b) Perceptions about control over his/her own behaviour, i.e., whether performing renal QI-DTPs instead of standard practice activities is within or outside his/her control (e.g., difficulties with getting patients number/time are not enough for conducting renal QI-DTPs).

TDF Domains	Coding Guide
	c) Self-efficacy – a person's confidence that s/he can employ the skills that are necessary to resist temptation, cope with stress, and mobilize her/his own resources required to meet the demands of a situation. It is the person's own internal attribution of their ability to do this.
<b>Memory, attention and decision processes</b>	The processes involved, and the factors (e.g., a patient's circumstances) taken into account, when they make the decision to perform renal QI-DTPs.
<b>Optimism</b>	The confidence expressed that things will happen for the best, i.e., that use of renal QI-DTPs will successfully treat patients. Pessimism also coded within this domain, i.e., using renal QI-DTPs will end in disaster with high patient volumes.
<b>Emotion</b>	Feelings or affect about performing renal QI-DTPs instead of standard practice (e.g., felt anxious about patient's situation and therefore reverted to standard practice; renal QI-DTPs are stressful).
<b>Knowledge</b>	Existing procedural knowledge, knowledge about guidelines/literature, knowledge about evidence/how to manage renal patients using renal QI-DTPs.
<b>Skills</b>	Competence, ability required/proficiency acquired through practice to manage renal patients using renal QI-DTPs compared to standard practice.
<b>Goals</b>	Priorities, importance, commitment to a certain course of actions or behaviours, intentions.
<b>Intentions</b>	A conscious decision to perform a behaviour, stability of intentions (e.g., always intends to perform renal QI-DTPs first but if the problem is not solved, revert back to standard practice).
<b>Social/professional role and identity</b>	Pharmacists' expressions about their own professional identity/job/role/professional boundaries and comparisons about their role with that of other professionals (e.g., performing renal QI-DTPs instead of standard practice is part of my job as a pharmacist).

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