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CANADIAN ASSOCIATION OF NEPHROLOGY NURSES AND TECHNOLOGISTS
L'ASSOCIATION CANADIENNE DES INFIRMIÈRES ET TECHNICIENS DE NÉPHROLOGIE

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Kidney Disease and Obesity

HEALTHY LIFESTYLE FOR HEALTHY KIDNEYS

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Letter from the Editors

Happy New Year! As we start a new year, we have the opportunity to refocus, reenergize, and recommit to the work we do, and the patients and families we work for. With new beginnings come fresh perspectives and, sometimes, new faces. Please take some time to meet your new CANNT Board members (their photos and bios are included in this issue). Please also take some time to read about the award winners who were announced in October at the CANNT 2016 conference in London. There is so much great, innovative work being in done in nephrology in Canada, and national recognition through the CANNT awards is one way to acknowledge these works and accomplishments. Other ways to share these great innovations are through presentations at the next national conference and, of course, through publication in your *CANNT Journal*. As always, we accept article submissions from both seasoned and budding authors. Guidelines for authors can be found on the CANNT website.

Finally, I would like to share that I (Matt) will be moving on from the role of journal co-editor. I have learned a lot over the past two years, and have thoroughly enjoyed the experience of working with Jovina, our publisher Pappin Communications, our translators at Lemieux Bédard, the CANNT Board of Directors, the CANNT office, and, of course, all of the authors who have submitted articles, or series of articles. Specifically, I do need to acknowledge Jovina for being an amazing co-editor… great to work with, intelligent, insightful, and collaborative. Thank you, Jovina! The journal remains in good hands!

We hope you enjoy this issue!

Matt Phillips and Jovina Bachynski
CANNT Journal Co-editors

Mot des corédacteurs en chef

Bonne année! Le début d'une nouvelle année nous fournit l'occasion de nous recentrer et de renouveler notre énergie et notre engagement à l'égard du travail que nous accomplissons et envers les familles et les patients pour lesquels nous travaillons. Avec les nouveaux départs viennent de nouvelles perspectives, et parfois de nouveaux visages. Je vous invite à prendre le temps de faire la connaissance des nouveaux membres du conseil d'administration de l'ACITN, dont les photos et les biographies figurent dans ce numéro. Prenez aussi quelques minutes pour lire l'article sur les lauréats de prix qui ont été annoncés en octobre à l'occasion du Congrès 2016 de l'ACITN, qui s'est tenu à London. Un travail exceptionnel et innovateur est réalisé en néphrologie au Canada, et les prix de l'ACITN, qui offrent une reconnaissance nationale, constituent l'une des façons de souligner ce travail et ces réalisations. Une autre façon de partager ces formidables innovations est d'effectuer une présentation à l'occasion du prochain congrès national et, bien entendu, de publier un texte dans votre *Journal de l'ACITN*. Comme toujours, nous acceptons les propositions d'articles tant des professionnels chevronnés que des personnes nouvellement admises dans la profession. Les lignes directrices pour les auteurs se trouvent sur le site Web de l'ACITN.

Enfin, je vous annonce que je quitterai mes fonctions de corédacteur du Journal. J'ai beaucoup appris au cours des deux dernières années et j'ai adoré mon expérience de travail avec tous mes collaborateurs : Jovina, notre éditeur Pappin Communications, nos traducteurs chez Lemieux Bédard, le conseil d'administration de l'ACITN, les personnes travaillant au bureau de l'ACITN et, bien sûr, tous les auteurs qui ont soumis des articles ou une série d'articles. Je remercie tout particulièrement Jovina pour son extraordinaire travail de corédactrice, son agréable présence, son intelligence, sa perspicacité et son esprit d'équipe. Merci, Jovina! Le Journal demeure entre bonnes mains!

Nous espérons que vous aimerez ce numéro!

Matt Phillips et Jovina Bachynski
Corédacteurs du Journal de l'ACITN

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Message from the President

This past year has been a very exciting one for CANNT, both nationally and internationally! The 2016 CANNT Symposium in London, Ontario proved to be a very informative, innovative, and successful educational event. A big thanks and appreciation goes out to the 2016 planning committee for enhancing our annual tradition of hosting a high-quality, national conference. The feedback from the conference delegates, the majority being first-time attendees, was enthusiastically positive with the calibre of this year's program. Thanks to the insight of the planning committee, the introduction of some fresh ideas, including a "chill" room were well received. Thank you also to Heather Reid, our conference planner, and her team, for providing support and guidance to the planning committee.

Internationally, my active participation as both an invited keynote speaker at the annual European Dialysis and Transplant Nurses Association/European Renal Care Association (EDTNA/ERCA) conference in Valencia, Spain, and presence at the international Nephrology President's Annual Meeting were well received by all. CANNT recently collaborated on a global project, originating from the international presidents' meeting, compiling the nurse: patient ratio statistics for hemodialysis settings. The final report included representation from all seven continents. Our collaborative efforts will now continue, as we work with EDTNA and its e-library initiative. During my time at the conference, it was evident that CANNT is very well respected, and our global community of nephrology practitioners is extremely excited to now be engaged with our great association! I have to admit I was very proud to say I was from the Canadian Association of Nephrology Nurses and Technologists!

Looking forward to 2017, the CANNT Board of Directors promises to continue advancing nephrology nursing and technological practices with some very exciting initiatives. Refreshing our website, expanding our social media reach through Facebook and Twitter, developing nephrology certification preparation materials, and further expanding our educational portal with videos and other nephrology-related materials are all on this year's agenda! Additionally, preparation for our prestigious CANNT Symposium to be held in Halifax, Nova Scotia, in 2017 is already well underway!

In closing, please contact the CANNT National Office with any ideas/suggestions that could strengthen our organization. We are always looking at increasing membership and value your input.

Respectfully,
Anne Moulton,
CANNT Interim President

PLEASE SEND ALL SUBMISSIONS, QUESTIONS, OR COMMENTS TO:

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Le mot de la présidente

L'année qui vient de se terminer a été très excitante pour l'ACITN, tant à l'échelle nationale qu'internationale! Le Congrès 2016 de l'ACITN à London, en Ontario, s'est avéré très formateur, informatif, innovateur et réussi. Un grand merci aux membres du comité de planification du Congrès 2016, qui ont bonifié notre tradition annuelle en organisant un congrès national de grande qualité. Les délégués du Congrès, dont la majorité participait pour la première fois à l'événement, ont partagé des commentaires enthousiastes et positifs à propos du calibre du programme de cette année. Grâce à la perspicacité du comité de planification, les nouvelles idées qui ont été intégrées au programme, y compris la salle de « détente », ont été bien reçues. Merci aussi à Heather Reid, notre planificatrice de conférences, ainsi qu'aux membres de son équipe pour le soutien et les conseils qu'ils ont fournis au comité de planification.

Sur le plan international, ma participation active en tant que principale conférencière invitée à la conférence annuelle de l'European Dialysis and Transplant Nurses Association/ European Renal Care Association (EDTNA/ERCA) à Valence, en Espagne, tout comme ma présence à l'assemblée annuelle internationale des présidents d'associations de néphrologie, ont été bien reçues de tous. L'ACITN a récemment collaboré à un projet mondial émanant de l'assemblée internationale des présidents et visant à compiler les statistiques relatives au ratio infirmière-patients dans le contexte de l'hémodialyse. Le rapport final comportait une représentation des sept continents. Nos efforts collaboratifs avec l'EDTNA se poursuivront dans le cadre de leur initiative de bibliothèque virtuelle. Lors de ma présence à la conférence, il m'est apparu évident que l'ACITN était très respectée et que la communauté mondiale de néphrologues était enchantée de prendre part aux activités de notre formidable association! Je dois admettre que j'étais très fière de dire que je faisais partie de l'ACITN!

En 2017, le conseil d'administration de l'ACITN promet de poursuivre son travail pour faire avancer les pratiques infirmières et technologiques en néphrologie avec des initiatives très intéressantes. Nous avons déjà plusieurs activités au programme pour l'année à venir, par exemple rafraîchir notre site Web, élargir notre portée sur les médias sociaux grâce à Facebook et Twitter, élaborer des documents de préparation à l'agrément en néphrologie et enrichir notre portail de formation en y ajoutant des vidéos et d'autres documents liés à la néphrologie. Par ailleurs, les préparatifs pour notre prestigieux Congrès de l'ACITN, qui se tiendra à Halifax, en Nouvelle-Écosse en 2017, vont déjà bon train!

Pour conclure, je vous invite à communiquer avec le bureau national de l'ACITN si vous avez des idées ou des suggestions qui pourraient renforcer notre organisation. Nous cherchons toujours à accroître le nombre de membres et apprécions vos commentaires.

Respectueusement,
Anne Moulton,
Présidente intérimaire de l'ACITN

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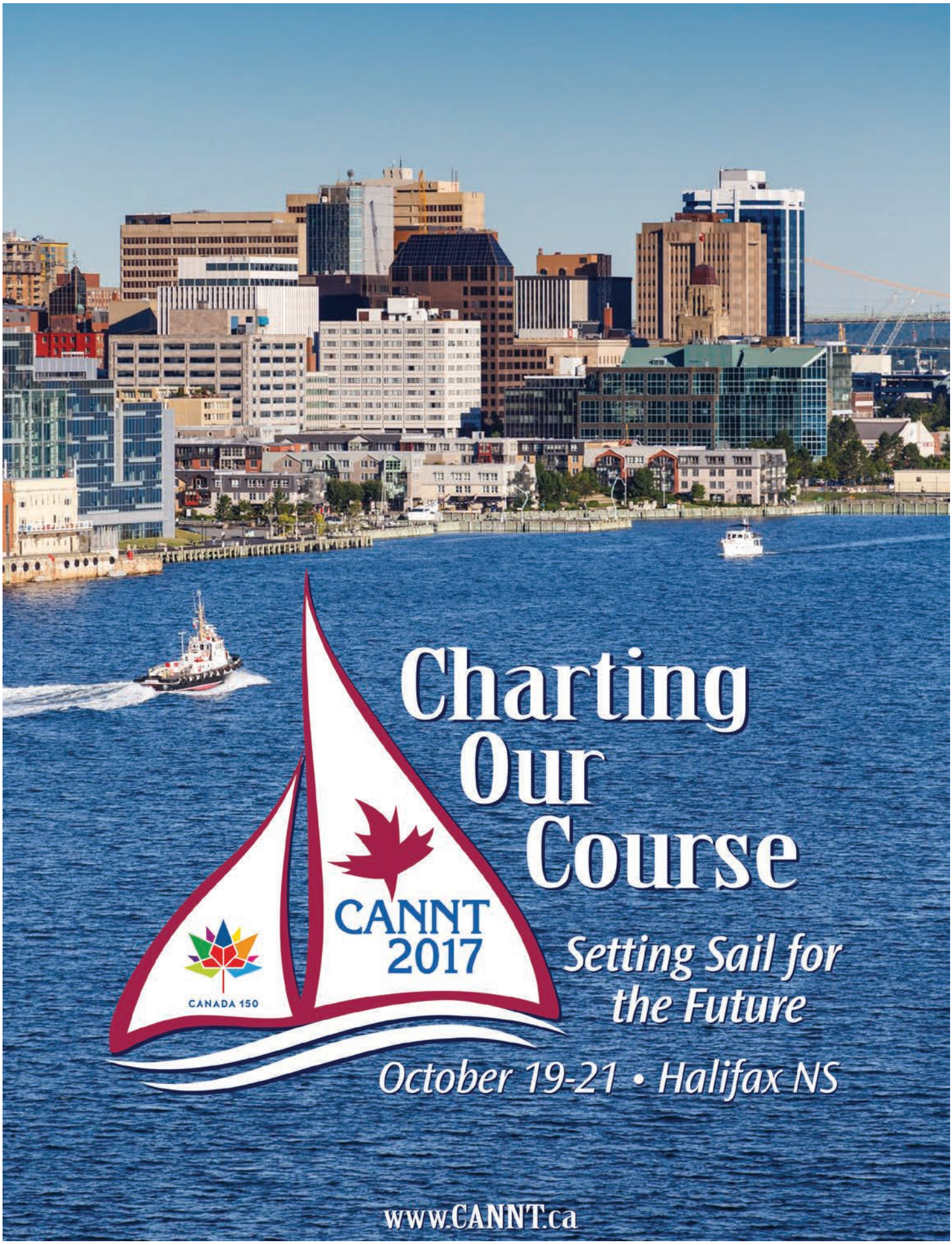
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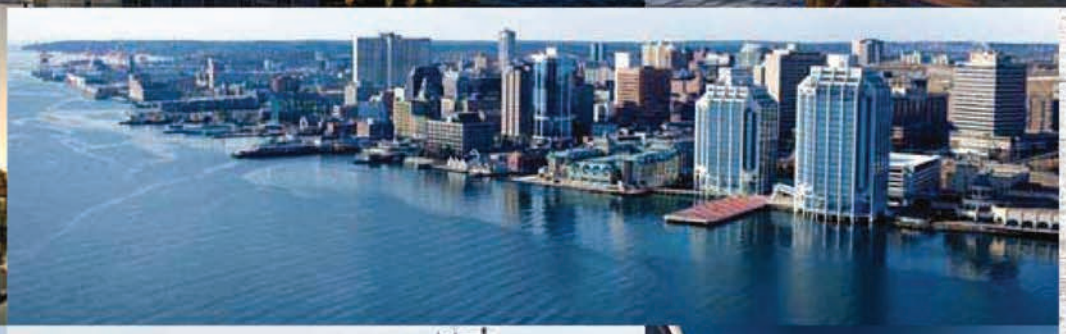


HALIFAX

Come aboard in Halifax, NS October 19-21, 2017. Experience all the new Nova Centre has to offer. The spectacular view over-looking the Halifax Harbour will inspire, renew and challenge you to *set sail for the future.*

Share in the messages of top rated professional speakers. Workshops and breakout sessions on topics that will educate and challenge you are being planned, including: Transitioning pediatric to adult care, CKD and hypertension, medical assistance in dying, and behaviour change management.

Join us on October 20, 2017 for our traditional Ceilidh (kitchen party), where you can enjoy live music and sample the local cuisine. *Halifax is ready to welcome you!*

CANNT 2016—Changing the Face of Tomorrow October 27–29, 2016 London, Ontario

"In all honesty, I found this conference was the best CANNT conference I have been to. Everything from the venue, hotel, food, speakers and wide range of topics exceeded my expectations. I have never had a bad experience at CANNT, but this was the best!" (delegate feedback). CANNT 2016 delivered on its promise to "Change the Face of Tomorrow" … with taboo topics, offsite unit tours, the chill room, the coaching corner, massages, CANNT Cash and more! There was definitely something for everyone and something new throughout. We boasted 109 first-time attendees—we hope we'll see them back again soon.

From October 27–29, the CANNT Board of Directors and CANNT 2016 Planning Committee hosted more than 430 colleagues at the London Convention Centre. Our creative and esteemed Planning Committee worked diligently to create a program that answered the feedback solicited from the 2015 conference attendees, as well as incorporated a wide range of local experts and a number of submissions from colleagues across Canada. In addition to nursing programming, the pediatric and technical streams were featured again this year, and we had solid attendance for both.

The conference plenary talks were outstanding—and the addition of a professional emcee, Melissa Schenk, brought an energy to the three days that was palpable and contagious! Our Evening of Entertainment featured a spontaneous "mask" reveal (delegates were able to creatively craft their own masks to be worn at the masquerade) and comedian Susan Stewart, who brought the house down with her infectious humour!

Our conferences are sustained by the generosity of our sponsors and the faithfulness of our exhibiting partners—we are grateful for their annual support. With a full tradeshow of 42 booths representing 35 companies, delegates were able to view the latest in technologies, learn about new services and chat with recruiters—all while earning CANNT Cash! Delegates also collected cash by participating in Specialty Networking activities, walk/runs, meeting Board members, etc.—and then used their CANNT Cash to buy raffle tickets to bid on seven fantastic prizes!

Thanks to everyone for thinking outside the box for CANNT 2016—together we "changed the face of tomorrow"! Delegates left informed, refreshed and re-energized to carry on with the valuable work they do every day.

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The Board of Directors of CANNT is grateful to CANNT 2016 Planning Committee for its dedication and commitment to creating a fantastic conference. Our thanks are extended to the following committee members:
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Barb Wilson, RN(EC), MScN, CNeph(C) | Conference Co-Chair
Billie Hilborn, RN, BScN, MHSc, CNeph(C) | Board Liaison
Wendy Esson, RN, BA, BSW, BScN, CNeph(C), CDE
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The experience of individuals transitioning from in-centre hemodialysis to home dialysis after a suboptimal start

By Caroline Sauvé, Amanda Vandyk, and Frances Fothergill Bourbonnais

ABSTRACT

Background: *Individuals diagnosed with end-stage renal disease may begin dialysis in a planned or unplanned manner. Recently, the term "suboptimal" has been operationalized to describe individuals who begin dialysis either without a permanent dialysis access while in the hospital or not in their selected dialysis mode. The purpose of this study was to explore the transition from hospital to home dialysis in a sample of individuals who began dialysis in a suboptimal way.*

Methods: *A qualitative descriptive design was used. Interviews were conducted, audio-recorded, and transcribed verbatim. Thematic analysis was undertaken.*

Results: *All participants were on peritoneal dialysis at home. The overarching theme "learning to live with it" and the subthemes of "living with loss", "managing fear", "getting informed", "needing support", and "living with hope" were all expressed as representing the transition to home dialysis after a suboptimal start.*

Conclusion: *Nurses play a pivotal role in assessing informational needs and providing timely instrumental support such as assistance with home dialysis therapy to those who have undergone a suboptimal start.*

BACKGROUND

Individuals suffering from end-stage renal disease (ESRD) need dialysis for a variety of reasons. Some people are able to maintain stable kidney function for years before starting dialysis, while others require emergency dialysis—often resulting from trauma or acute illness. Ideally, the decision to start dialysis is made by the patient in consultation with an interdisciplinary nephrology team (Park et al., 2015; Tennankore, Soroka, & Kiberd, 2012). When situations necessitate immediate action and adequate time is not available, individuals often begin dialysis without such planning.

Dialysis therapy includes both hemodialysis and peritoneal dialysis. Both therapies can be done at home. Acute starts in hospital usually necessitate hemodialysis because of urgent timeframes. Many terms exist to describe unplanned dialysis starts, such as "crash start" and "suboptimal start". For the purpose of this study, we have chosen to use the term "suboptimal" because of its growing prominence in published literature and regular use by clinicians. We operationalize "suboptimal start" as any initiation of hemodialysis in the hospital without a permanent dialysis access site, or dialysis that occurs via a non-preferred modality (Chiu, Alam, & Iqbal, 2012; Hughes, Mendelssohn, Tobe, McFarlane, & Mendelssohn, 2013; Piwko et al., 2012).

Approximately 50% of all dialysis initiations occur in a suboptimal manner (Hanko et al., 2011), meaning that half of patients starting dialysis do not have the opportunity to psychologically adjust to this treatment and its impact on their life (Park et al., 2015). Recent reports indicate that individuals who begin dialysis in a suboptimal way are more likely to experience stress, anxiety, and depressive symptoms, which may affect their future choice of dialysis modality (Lecouf, Ryckelynk, Ficheux, Henri, & Lobbedez, 2013; Park et al., 2015). In fact, suboptimal starts to dialysis are shown to contribute to the ongoing use of in-centre hemodialysis (rather than home dialysis, i.e., peritoneal dialysis or hemodialysis) (Watson, 2008), even though evidence supports better patient outcomes with home dialysis (Masterson, 2008; Oreopolous, Thodis, Passadakis, & Vargemezis, 2009; Sinnakirouchenan & Holley, 2011). Although some researchers have suggested that this continued use of in-centre hemodialysis in the suboptimal start population may be because of a lack of discussion and education around home dialysis modalities (Marron et al., 2005; Watson, 2008; Thodis & Oreopolous, 2011), no study specifically explores this experience from the patient's perspective. The purpose of this study was, therefore, to explore the transition from hospital to home dialysis in a sample of individuals who began their dialysis in a suboptimal way.

METHODS

Study design

We used a qualitative descriptive study design to address the following research question: How do individuals with

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ESRD experience the transition to home dialysis after a suboptimal start? This method, which fits within the constructivist paradigm (Guba & Lincoln, 1994), was chosen because it allows the researcher to obtain a straight description of the phenomenon, such that the voice of the research participant is understood (Sandelowski, 2000).

Participants and Recruitment

Six participants with ESRD who transitioned from in-centre hemodialysis to home dialysis after a suboptimal start were purposefully recruited through two dialysis clinics in a large tertiary care hospital in Ontario. Inclusion criteria for recruitment included: individuals who were able to read, write, and speak French or English, and who signed a "Consent to be Contacted for Research Purposes" form. Recruitment was facilitated by nurses working in the dialysis clinics.

Ethics

Ethics approval was obtained from the Research Ethics Board of the first author's educational institution and the Research Ethics Board at the participating hospital. Informed consent was received from each participating individual and consent forms were signed, dated, and witnessed.

Data Collection

Data collection occurred through individual face-to-face semi-structured interviews (Polit & Beck, 2012). The participants were asked the general question: What was it like to transition from in-centre hemodialysis to home dialysis? A list of predetermined questions and prompts were then used to guide the remainder of the interview. The semi-structured interviews were audio-recorded and transcribed verbatim. Memo writing was used to help guide the data analysis. Subsequent to the interviews, participants' medical records were accessed to obtain/confirm clinical information.

Data Analysis

Data were analyzed using thematic analysis as described by Graneheim and Lundman (2004). First, we carefully read the transcripts to gain a comprehension of the whole. Next, we divided the text into "meaning units" or "constellations of words or statements" that relate to the same central meaning. Meaning units were then condensed into shorter statements and assigned codes. We then described and interpreted these at a higher logical level. Finally, we compared the codes based on their commonalities and differences and assigned them to categories and subcategories, which were then reworded as themes.

Trustworthiness

To ensure the rigour of the study, Guba and Lincoln's (1989) criteria of credibility, dependability, transferability, and confirmability were followed. The primary investigator had three years of experience working in the domain of nephrology. Other members of the research team had expertise in qualitative research and one had experience conducting qualitative studies with patients on hemodialysis. All team members independently reviewed the transcripts and achieved consensus regarding the themes. An audit trail was kept of all decisions related to data analysis and the transcribed interviews were verified with the recordings, and direct quotes from the participants were used to support each theme.

RESULTS

Participant Characteristics

Of the six participants, three were female and three were male. Their ages ranged from 30 to 63 years, with an average age of 49 years. Four participants were married and living with their spouses, and two were single and living with roommates. Etiologies of the participants' ESRD included: diabetic nephropathy (n=3), cardiac disease complications (n=1), membranous nephropathy (n=1), and unknown (n=1). The average length of time on in-centre dialysis before transitioning to home dialysis was 5.6 months (range of two to 18 months). Three participants were followed by a nephrologist prior to their respective suboptimal start; the length of consultation ranged from one to seven years. Finally, all participants were currently on peritoneal dialysis at home, and half of the participants had begun the necessary testing and preparations to receive a renal transplant.

Learning to Live with It

The participants revealed the challenges they confronted living with ESRD and starting on dialysis. The overarching theme was "learning to live with it", which referred to living with renal failure, and the participant's experience of starting dialysis through to the transition to home dialysis. There were five subthemes: living with loss, managing fear, needing support, getting informed, and living with hope (Figure 1). The participants also described several facilitators and barriers to this transition.

Living with loss.

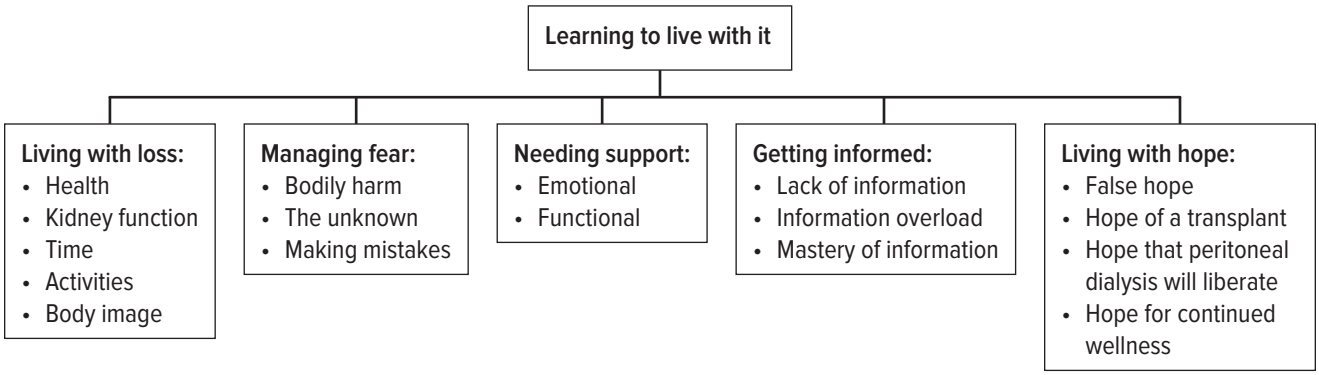
The entire transition from suboptimal start to home dialysis was marked with feelings and emotions associated with loss. All participants reported on loss of health, kidney function, time, activities, and body image.

Loss of health. All participants described loss of health in detail. Whether it was due to complications of an acute illness or of a long-standing chronic illness, participants generally described themselves as being acutely ill when they first started hemodialysis. Participants recounted this manifestation of acute illness through their experiences of shortness of breath, weight gain, loss of energy, and chest pain. This seemed to affect their level of consciousness when first starting hemodialysis. Two of the participants did not recall all of the circumstances surrounding this event.

Loss of kidney function. When recounting the experiences of their suboptimal start and their state of mind when they were first informed of their permanent loss of kidney function, all six participants experienced feelings of shock and denial that such a loss had occurred. One participant described his experience in the following way: "*I mean, emotionally I was devastated, right? I was in shock at that point, at that exact point I was actually in shock! I didn't eat for a day or anything like that, I was just, because I know I didn't take complete healthy care of my body, but I don't smoke, I don't drink excessively or even all that much you know…this happened in the totally left field!*"

The participants did not clearly understand the implications of complete loss of renal function until they began hemodialysis in the hospital. At this pivotal time, participants felt other losses associated with living with ESRD.

Figure 1: Schematic Representation of Themes



Loss of time. The loss of time associated with having to do hemodialysis three times a week was described by all participants, as was the subsequent disruption of their schedules and, ultimately, lifestyle. Treatments could last from four to six hours including the machine set-up and travel time to the hospital dialysis unit. One participant suffered loss of employment and the only participant who continued to work while undertaking hemodialysis noted the effect of hemodialysis on his ability to maintain a regular work schedule: "*You know, like it is a solid four hours by and large, you're losing a morning, you know? So, if your work's able to accommodate that, you know? And yeah, I guess it was positive, but you know it's not ideal because you know if you're trying to do any coordinating with people from other departments or whatever it is, if you block off two mornings a week, that's a detriment to the job for sure!*"

Loss of activities. Three participants described the loss of certain activities, such as swimming and showering, endured because of the necessary restrictions related to having a dialysis central venous line. One participant recalled how she would no longer be able to go swimming at her cottage: *"It was a little bit of a shock because it was like, okay, now I can't go swimming anymore and up at the cottage and that's out now, no more swimming!*"

Loss of body image. Finally, loss was also associated with positive body image. Three female participants described a feeling of abnormality related to having one or more dialysis catheters embedded in their body. One of these participants, who had just begun home dialysis and still had a hemodialysis catheter in her chest, as well as peritoneal dialysis catheter in her stomach, stated the following: *"Like it just bothers me, it's not, not normal. Something sticking out of you like that!"*

This feeling of abnormality translated to a feeling of self-consciousness when the female participants were in public. This led one participant to try and cover the catheter during the summertime by wearing non-revealing clothes. She described her experience in the following manner: "*Well, in the summertime I don't like to wear and be completely covered up, I like little straps or whatever and people would see it and look at it and look at you funny and it was kind of like* [groans]*, trying to cover it up since they won't bug me! Yeah, because they looked at you and they were looking at you and it was like, okay, there's nothing wrong with me, really. I'm okay, I'm still normal. I just got, you know! That was about it, yeah.*"

Managing fear.

Fear was a powerful and significant denominator in the transition to home dialysis after a suboptimal start. This fear was characterized by the fear related to bodily harm, the unknown, and making mistakes.

Bodily harm. Four of the participants described an acute fear of bodily harm when they were first admitted to hospital and were informed of the loss of their kidney function, and when they began preparations for their first hemodialysis session. Four participants expressed fear of central venous catheter insertion for hemodialysis. One participant cited: "*The pain! I'm not, I'm just… because of where it is on my body it just… and I'm diabetic, right? And I have an insulin pump, so it's not like I'm afraid of having it put in there, it's just the process of putting it in, I think, because I remember after, I mean I practically was hysterical! I didn't look at it for like, I mean, probably for the first week!*"

Three of the participants also feared getting a definitive vascular access in their arm (i.e., arteriovenous fistula or graft) because of its "*appearance and the harm it would cause their circulatory system*". Fear of bodily harm was present in the transition to peritoneal dialysis and two participants feared developing peritonitis. This fear was directly related to participants' sense of confidence and capability with doing peritoneal dialysis at home. It was described as an ever-present fear once participants started on home dialysis. They, therefore, moved from acute to chronic fear in their transition from in-centre hemodialysis to home peritoneal dialysis.

The unknown. Initially, participants described fear of the unknown. For three participants, this fear was related to an uncertainty of how they would manage peritoneal dialysis on their own. As one participant explained, the first night was fearful for two reasons: fear of the unknown and fear of making a mistake while programming or troubleshooting the dialysis machine: "*The first, the first two nights I was a little nervous. I would make an error or something, but I didn't, you know? And when, when everything was delivered, my nurse, case nurse, she came to the house to set it up and to run through everything with me one more time, you know? But, no, I was nervous the first two nights, but it's nothing now.*"

Making a mistake. Two participants described fear of making a mistake in the management of peritoneal dialysis, as they were solely responsible for their own care at home. As one participant explained: *"Well, I was less stressed with the hemo than with the peritoneal because, you know, I'm constantly afraid of doing something wrong."* These participants were single and living with roommates, which highlights the importance of support in carrying out home dialysis.

Needing support.

The participants required different types of support at different times. Support included both emotional care and functional assistance.

Emotional support. During the initial loss of kidney function, participants required emotional support. Three participants recounted initially being in a state of shock and emotional devastation. This led them to want those around them to acknowledge their loss and offer emotional support. As one participant stated: ***"****Well, after I got over my shock, you know, I was very emotional at that time, I had tears and stuff and cried…I had a lot of people that were concerned about me that helped, the family and the friends. You know, it helped to have that emotional support."*

When making the decision to switch to home dialysis, three participants also described wanting to make the decision independently, but with the unconditional support of those around them. For one participant, it was very important to her husband that she be the one to make the decision to start home dialysis: "*No, I think he just stood back, he said, you do what you need to do* [patient's name]. *He's there all the time supporting, going to everything. Like, he's agreed, agreeing with me, but he's making sure that I made the decision, not him. I think it was very important that I didn't feel forced into going either way, so I can't blame him* [laughs]*!*"

Functional support. As participants became accustomed to their lack of kidney function, they needed support that was more functional in nature and that related to the physical requirements of peritoneal dialysis. For example, all participants required healthcare workers to be available by telephone, in person, or on email in order to answer their questions regarding technical difficulties with their machines. One participant recalled how she needed help from her roommates to carry supplies and dispose of the peritoneal dialysate.

Getting informed.

In their transition from a suboptimal dialysis start to home dialysis, participants received information through a multitude of channels. This information covered their diagnosis, dialysis modality teaching, or other educational material. It also included their need for understanding how hemodialysis works and how to undertake home therapy. Participants described the information received on a spectrum from information overload, to the right information being delivered at the wrong time and, ultimately, to a mastery of information.

At first, the participants did not possess enough information and four participants recounted not having received adequate education about living with ESRD. This contributed to a sense of fear when they were first made aware of their diagnosis: "*I didn't really know what that meant for me and it wasn't really well explained what that meant besides the fact that my kidneys weren't working, so I had no idea what to expect! I didn't know what to expect and I was, I was feeling very cold because what it does, it actually lowers the blood* (temperature)*!*"

When information was conveyed to participants, the experience was described as "overload". Health providers attempted to brief participants on their diagnosis and help them to prepare to undergo hemodialysis in a quick timeframe due to the urgent nature of the situation: "*I think things happen so fast and like I had never been told to reduce salt because my kidneys were always working at, I don't know, forty or fifty percent all the time, so, and it's just that last couple of months it just, went to zero like really quickly, so I just thought I wasn't prepared at all! So, I didn't have it, but then it was information overload because they're trying to cram you! Well, I mean first of all, I'm asking for more information so I can make a decision and everyone's trying to educate you, you know quickly, get you to par and it definitely became information overload!*"

All participants commented on the manner in which information was partitioned and delivered to them during the suboptimal start. Two participants recounted the poor bedside manner of the physicians who informed them of their diagnosis, as well as the anger they felt towards these physicians because of the poor delivery of information. Although four participants stated that they received good information on the different dialysis modalities, it came at a time when they were unable to process the information and come to a proper decision. A participant described his first reaction to dialysis modality teaching as: "*I guess I was still in denial at that point, I was still convinced that my kidney function was going to recover! So, I didn't really, I mean we put it off for a little while. Well, I don't know if we put it off or if they put it off, but when they first mentioned it was a possibility, I don't think that personally I was ready to accept at that point that it was going to be ongoing.*"

Information was not tailored to individual needs. Hemodialysis training was deemed unnecessary by three participants, as such information had already been delivered at other outpatient dialysis units. Three participants commented that they would rather progress through peritoneal dialysis or hemodialysis training at their own pace than at a standardized pace. Interestingly, once participants started home peritoneal dialysis and successfully navigated the initial challenges, they felt as though they could accomplish home dialysis independently. They also knew how to access available information resources, such as the home dialysis nurses, if they encountered problems. This suggests a progression to a mastery of information.

Living with hope.

Hope was expressed by all participants and was described as a progression from false hope to the hope of a transplant or the hope that peritoneal dialysis would liberate them and enable a normal life. There was also hope for continued wellness.

Upon first learning of the loss of their kidney function, three participants thought that this loss was only temporary or that there had been a mistake in diagnosis. One participant recalled his reaction when physicians informed him that his loss of kidney function may be temporary: *"I knew it was a risk, but, of course, that's when I'm like I really hope that it's not! I know I was thinking to myself, oh God, please let them be overlarge, please let them be overlarge!"*

Three participants, who were eligible for kidney transplantation and who had begun the preparation process, only viewed peritoneal dialysis as a stepping stone to obtaining a kidney transplant, and remained hopeful of the perceived advantages of transplant. All of the participants also hoped that home dialysis would liberate them from the restrictions imposed by outpatient hemodialysis and enable them to have the life they led before they lost their kidney function. One participant explained how she hoped home dialysis would enable her to travel to her cottage more often, which she had not been able to do since she started hemodialysis.

Finally, once they were established on home dialysis, five participants expressed hope for continued wellness, and for the ability to continue to thrive on home dialysis and maintain their current lifestyle. One participant expressed his hope for the future: *"I see myself on home dialysis for the next five years! Yeah, as long as, as long as the membrane holds up."*

Facilitators and Barriers to Home Dialysis

In their interviews, participants stated tangible factors that had facilitated or inhibited their decision to adopt and remain on home dialysis. The facilitators consisted of freedom, simplicity, support, safety, and being at home; the barrier consisted of the disruption of life (Table 1).

DISCUSSION

The results of this study suggest that there are many challenges during the transition from a suboptimal dialysis start to home peritoneal dialysis. Participants described living with loss, managing fear, needing support, getting informed, and living with hope.

Loss was very important for the participants of this study, who described having to live with loss of their kidney function, health, activities, and body image. These losses resonate with other published accounts by people with ESRD (Finnegan-John & Thomas, 2013; Chan, Brooks, Erlich, Chow, & Suranyi, 2009); however, a difference was noted in terms of travel and relationships. The participants experienced more freedom to travel once on peritoneal dialysis (as opposed to an inability to travel) and did not relate the loss of family and personal relationships as a consequence of ESRD, as has been previously identified (Chan et al., 2009). This may be attributed to the fact that participants recounted receiving a lot of support from family and friends during their suboptimal dialysis start, which strengthened their personal relationships.

Learning to Cope with Chronic Illness and Life Sustaining Technology

Participants reported needing different types of support during their transition to peritoneal dialysis: emotional and functional, as well as informational support. The participants reported that while they needed to accomplish the decision to undergo home dialysis independently, they wanted the support of their friends and family. When this unconditional emotional support is not available, and family members demonstrate a disinterest in home dialysis, individuals report this to be a significant barrier to the adoption of home dialysis (Zhang et al., 2010). A study undertaken by Morton and colleagues (2010) demonstrated that educating patients and their caregivers about the disadvantages and advantages of different renal replacement therapies resulted in an increase in both caregivers and patients choosing home dialysis. It may be that involving caregivers in dialysis modality decisions increases their sustained commitment to the therapy.

Nurses can also play a role in providing instrumental support, such as assistance with the home dialysis therapy. Our participants reported needing assistance with troubleshooting issues with their peritoneal dialysis machines and ordering home dialysis supplies. Our findings were reflected in a study by Rygh, Arild, Johnsen, and Rumpsfeld (2012) that suggested that feelings of security and coping in patients beginning home dialysis were directly related to close contact with home dialysis staff for issues such as machine alarms, complications, and ordering home dialysis supplies. In practice, nurses need to be trained to screen for lack of support and learn how to provide extra support to individuals when they first transition to peritoneal dialysis. Descoeudres et al. (2008) showed that the first six months on home dialysis represented a period of vulnerability for all individuals and that a lack of support during this period predicted patient dropout from home dialysis.

Information and its delivery were widely discussed by the study participants and several recounted how they felt rushed to process information and make a decision. This finding is echoed in the results of a recent systematic review (Morton et al., 2010) in which individuals suffering from ESRD did not feel as though they possessed enough information when faced with the need to make a decision about dialysis. It is likely that those undergoing a suboptimal start experience this to a greater degree because they do not have the same time to prepare and adjust (Park et al., 2015). In times of crisis, the delivery of information plays a great role in the patient's ability to understand, process, and use what is provided to make an informed decision (Lecouf et al., 2013). Our participants clearly described not only information overload, but also a mistiming in delivery. Rioux, Cheema, Bargman, Watson, and Chan (2011) found that having an advanced practice nurse dedicated to providing patient-centred education about dialysis modalities increased the number of successful transitions to home dialysis after a suboptimal start. Because an advanced practice nurse in this role is not commonplace, administrators should consider preparing all nurses working in nephrology on the appropriate delivery of information. At the very minimum, a discussion on dialysis modality should be broached as soon as possible with all patients.

Most participants of this study reported overcoming their initial fear about making a mistake with the therapy

Table 1: Facilitators and Barriers in Home Dialysis

Facilitator[(F)] or Barrier[(B)]	Description	Theme	Participant Quote
Freedom[(F)]	Increased freedom related to the flexibility of schedule with the PD schedule, the opportunity to travel, to maintain employment, to shower and swim, as well as to be subjected to less fluid and dietary restrictions.	Living with hope	"At home, doing it at home now gives me a lot more freedom so at least my days are all mine now, I only have to worry about getting on the machine at night. So I can whatever, I'm back to what I had, what I was before I got sick so.''
Simplicity[(F)]	Relief related to the sense that PD training is simple and that the regimen itself is easy to make adjustments to and to execute. "It's not more difficult than programming a VCR."	Getting informed	
Support[(F)]	Support received from home dialysis staff and from Baxter	Needing support	"The nurses have been very supportive actually, very, very supportive, so that's been nice [...] It's your choice try it, if you don't like it you can come back, it's up to you, there's no pressure. And when I got, got to home dialysis, they said the same thing, you know, let's try and make this work for you.''
Safety[(F)]	Perceived safety of PD related to the safeguarding provided by its alarm system and the decrease in caution necessary with the PD catheter, as opposed to the hemodialysis catheter.	Managing fear	"I like the idea with the dialysis because I can shower, I can do more things, it's well covered that I don't have to worry about getting it hooked. I just had to watch what I wore when it was here [points to chest]".
Being at home[(F)]	The ability to accomplish dialysis in the comfort of one's own home and not having to travel to do dialysis.	n/a	"Well it's like I'm saying, you're in the comfort of your own home, you know, you're not sitting in a chair for four hours, you're sleeping.''
Disruption of life[(B)]	The disruption of home dialysis into individual's life occasioned by the time requirements of PD, the storage of medical supplies in the home, the disruption of sleep, and the presence of PD supply delivery workers in the home.	Living with loss	''Like I used to be a night owl, ten, eleven, twelve like you know. On hemo you show up as long as you're there for seven fifteen. You know like certain parts, PD is quite a lot more intrusive and you're probably not getting as good a sleep, you know, the machines will alarm every now and then.''

and the resulting sense of safety. Of note, the length of time for this fear to dissipate was different in all cases, and one participant reported feeling anxious for months. Peritoneal dialysis is the simpler form of dialysis, and evidence supports that individuals quickly learn and adapt to the requirements of peritoneal dialysis therapy despite initial skepticism (Rygh et al., 2012). Simulation-based learning could be considered to help individuals overcome their initial lack of familiarity with equipment and it could help them prepare to troubleshoot situations at home.

Limitations

It is important to consider the limitations of our recruitment. We set very precise inclusion criteria and, therefore, recruitment within these parameters was very challenging. Although the total sample of six is small for studies of this design, we did note a redundancy in data after analysis of the sixth participant's transcript and feel that the views conveyed in this study are representative of the views of the individuals who have undergone the transition to home dialysis after a suboptimal start. We also used a purposive sampling technique. It is possible that we obtained participants who were more eager to participate in studies and possess a different set of views than individuals who had declined to be contacted for research purposes. Finally, we did not recruit any participants who went home on hemodialysis. Interviewing these individuals could have produced a different set of data due to the differences between both home dialysis modalities. These differences are attributed to the complexity of the management of home hemodialysis and its increased time requirement. Home hemodialysis may require modifications in the home such as access to additional water supply. As well, there is the consideration of the use of a vascular access, as well as more complex machines (Nesrallah et al., 2013). These two home dialysis modalities possess different implications for patients and their families, as well as for the clinicians.

CONCLUSION

This study focused on the transition to peritoneal dialysis at home after a suboptimal dialysis start. Although the support provided by health care professionals was very well received by participants in our study, as was the peritoneal dialysis regimen itself (i.e., simple, safe, and convenient), our findings provided certain implications for practice. Nurses may need more information sessions on how to educate patients who have undergone a suboptimal start and who will have transitioned to home peritoneal dialysis by gauging informational needs and presenting the information in a timely manner. This could help allay many of the fears that participants reported feeling in this study. Our study supports the need for more research in determining effective methods of information delivery to this patient population concerning renal replacement therapy.

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CONTACT HOUR: 2.0 HRS

Drug dosing in dialysis

By Jam Bravo and Marisa Battistella

LEARNING OBJECTIVES

By the end of this module, readers will be able to:

1. Identify key drug properties and technical aspects of the dialysis procedure that can determine dialysis of drugs
2. Describe how drug properties can affect dialysis of drugs

Chronic kidney disease (CKD) is estimated to affect 10% to 15% of the general population, with 3 million people diagnosed with CKD in Canada alone (Arora et al., 2013; Coresh et al., 2007). End-stage renal disease (ESRD) represents the last stage of CKD requiring hemodialysis, peritoneal dialysis, renal transplant, or conservative management. Patients with ESRD on hemodialysis commonly have multiple comorbidities that require pharmacological management including hypertension, diabetes, coronary artery disease, and anemia. Healthcare workers looking after patients with ESRD should be aware of the pharmacokinetic changes in patients requiring dialysis. Pharmacokinetics describes the time course of drug absorption, distribution, metabolism, and elimination. The most common pharmacokinetic alteration in patients with ESRD is the reduced excretion of drugs that are primarily eliminated by the kidneys. Reduced clearance of drugs can lead to accumulation and increased risk for drug toxicity. Furthermore, certain drug properties determine which drugs will be cleared through dialysis and may require dose adjustment to ensure that the drug remains effective. Dose adjustment also avoids the risk for drug toxicity if the drug accumulates systemically due to poor clearance from dialysis.

This article reviews the common drug properties and aspects of the dialysis procedure that can impact the dialyzability of drugs in patients on hemodialysis. Drug properties that can impact drug dialyzability include molecular weight, volume of distribution, water solubility, and plasma clearance. Other key factors in the dialysis procedure that determine dialysis of drugs are the properties of the dialysis membrane and the flow rates of the blood and dialysate.

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MOLECULAR WEIGHT

Hemodialysis utilizes a synthetic membrane with a fixed pore size. The movement of drugs or other solutes through the dialytic membrane is largely determined by the size of the molecule in relation to the pore size. Smaller molecules are more likely to pass through the dialytic membrane in larger quantities compared to drugs and other solutes with a larger molecular weight. Conventional or low-flux dialyzers are generally impermeable to drugs with molecular weight ≥ 10,000 daltons (Da). On the other hand, high-flux dialyzers have larger pore size and closely mimic the filtration characteristics of human kidneys. These high-flux dialyzers can remove drugs with molecular weight of up to 20,000 Da (Götz, Böger, Popal, Banas, & Krämer, 2008; Macleod et al., 2005; Yeun, Ornt, & Depner, 2012). For example, Aranesp (darbepoetin alfa) is an erythropoiesis-stimulating agent commonly used in the dialysis population to treat anemia. It has a molecular weight of 37,100 Da. Its large molecular size does not enable it to pass through the dialysis membrane. More examples of drugs and their molecular weight can be found in Table 1.

Table 1: Examples of drugs and their molecular weight

Drug	Molecular Weight (Da)
Venofer (iron sucrose)	43,200
Aranesp (darbepoetin alfa)	37,100
Eprex (epotein alfa)	30,400
Vancomycin	1,486
Digoxin	781

PROTEIN BINDING

Drugs are primarily bound to proteins such as albumin and alpha-acid glycoprotein; these proteins are unable to cross the dialysis membrane due to the large molecular size and thus the drug-protein complex also cannot cross the membrane. Drugs that are ≥ 80% protein-bound are generally considered not significantly dialyzed. However, certain physiologic changes can affect the degree of drug-protein binding. Accumulation of organic acid in the blood (e.g., metabolic acidosis) can result in organic acids competing with acidic drugs such as phenytoin. Low albumin, which is typically seen in patients with malnutrition, inflammation, or vascular disease (Yeun & Kaysen, 1998), can also

result in decreased drug-protein binding. This results in increased drug concentration available for dialysis. Because protein-calorie malnutrition decreases albumin synthesis, hypoalbuminemia has been attributed to poor nutritional intake resulting from underdialysis. However, serum albumin can also result in decreased drug-protein binding. This results in increased drug concentration available for dialysis. If the decrease in protein binding is significant, then increased dialyzability of the free drug can occur. Phenytoin is an example of a drug that is highly protein bound. Because of phenytoin's narrow therapeutic window, it is advisable to measure the total and unbound plasma phenytoin concentrations, as well as monitor for clinical signs of toxicity or therapeutic failure, particularly in the setting of hypoalbuminemia where increased phenytoin renal clearance may occur. Therapeutic drug monitoring is highly recommended for other drugs with narrow therapeutic indices to optimize safety and efficacy (e.g., warfarin, phenytoin, lithium).

Table 2: Drugs and Protein Binding

Drug	Protein Binding
Warfarin	99%
Phenytoin	90–95%
Ramipril	73%
Digoxin	25%

VOLUME OF DISTRIBUTION

The volume of distribution of a drug (Vd) is the extent to which drugs distribute into the tissues. Drugs with large Vd are widely distributed in the tissues and present only in relatively small amounts in the blood. The amount present in the blood is the active form, which is responsible for the therapeutic effect of the drug. Drugs with high degree of lipid solubility would have a large volume of distribution into the tissues compared to drugs that are not as lipid-soluble. Another factor that can affect the volume of distribution of drugs is protein binding. Drugs that have high lipid solubility but are protein bound are not able to distribute into the tissues; on the other hand, drugs with high lipid solubility but low protein binding will have a larger volume of distribution. Because drugs with a large volume of distribution have more of the drug distributed in the tissues compared to amount of drug present in the blood, these drugs will be dialyzed to a lesser extent. Examples of drugs with large volume of distribution include digoxin and cefazolin.

In contrast, drugs with higher water solubility are dialyzed to a greater extent because the dialysate used for hemodialysis is an aqueous solution. Highly water-soluble drugs will have higher affinity to the aqueous dialysate. Examples of these water-soluble drugs include diltiazem and metoprolol. Patients should take these medications either after dialysis or give an adequate time interval between the time the drug is taken to the start of dialysis to avoid lowered plasma concentrations and reduced efficacy.

PLASMA CLEARANCE

The sum of renal and non-renal clearance is referred to as inherent metabolic clearance or the "plasma clearance" of a drug. Because dialysis largely replaces the renal clearance of a drug, the contribution of dialysis in the clearance of drugs not primarily cleared in the kidneys is low. Drugs that are primarily cleared by non-renal pathways such as those eliminated through hepatic clearance will not be significantly cleared through dialysis. Table 3 shows examples of drugs and their extent of renal clearance.

Table 3: Drugs and Renal Clearance

Drug	Renal clearance
Lithium	100%
Metformin	90%
Allopurinol	76%
Valproic acid	30–50%
Amlodipine	10%
Phenytoin	<5%
Diltiazem	2%

DIALYSIS MEMBRANE

The majority of dialyzers used before the mid-1990s were generally impermeable to drugs greater than 1,000 Da. Because most studies on the clearance of drugs were done using older and low-efficient membranes, most of the data on high-efficient membranes are extrapolated from data on studies done using low-efficient hemodialysis filters (Macleod et al., 2005). At present, dialysis membranes are mostly composed of synthetic or semisynthetic materials, which have a larger pore size. The increased pore size allows drugs with molecular weight greater than 20,000 Da to pass through the membrane more readily. Due to the decreasing popularity of low-efficient hemodialysis filters and the increased utilization of high-efficient membranes, more studies must be done to accurately determine drug clearance when using these newer generation of dialysis membranes.

Pore size and surface area of the dialysis membrane are primary determinants of the ability of a given membrane to remove drugs and solutes. Drugs and solutes primarily move by diffusion from an area of higher concentration (blood) to the area of lower concentration (dialysate). The removal of drugs with low molecular weight can be

enhanced by increasing the blood and dialysate flow rates. Drugs with lower molecular weight tend to be cleared in the proximal area of the dialyzer, which leaves the more distal end of the dialyzer for enhanced clearance as the flow rate increases. In contrast, drugs with larger molecular weight will have a constant clearance across the dialysis membrane. The clearance of drugs with high molecular weight is independent of flow rates and is largely determined by the surface area and the pore size of the dialysis membrane. Removal of drugs with large molecular weight is enhanced by the use of high-flux membranes (Yeun et al., 2012).

DRUG ADMINISTRATION IN DIALYSIS

Physicochemical properties of the drug and certain properties of the hemodialysis procedure such as pore size and surface area are not easily altered. However, adjustments in the drug administration can be managed to ensure the optimization of safety and efficacy of the drugs administered in dialysis patients. A common way to avoid sub-therapeutic concentrations of drugs that are efficiently eliminated by hemodialysis is to schedule the dosing time to maximize the amount of time that the drug stays in the body. For example, dialyzable drugs are commonly administered after hemodialysis to ensure that the patient gets adequate exposure to the given drug. Healthcare providers should be mindful of prescribing drugs to dialysis patients to ensure that the dosing is optimized to the patient's hemodialysis schedule. Ideally, frequency of drug administration should be scheduled up to a maximum of twice daily whenever possible.

CONCLUSION

Healthcare professionals must rely on pharmacokinetic principles to predict the removal of drugs through dialysis. A drug's pharmacokinetic and physicochemical properties are useful tools in predicting its dialyzability. Of note, this article serves as a guide for clinicians on how to optimize drug therapy in patients undergoing hemodialysis and should not serve as the sole basis of clinical decision-making.

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CONTINUING EDUCATION STUDY QUESTIONS **CONTACT HOUR: 2.0 HRS**

Drug dosing in dialysis

By Jam Bravo and Marisa Battistella

1. Which of the following drugs will be most likely removed by hemodialysis?
   a) Amlodipine
   b) Valproic acid
   c) Lithium
   d) Diltiazem
   e) All of the above
2. Therapeutic drug monitoring is advisable for which of the following:
   a) Vancomycin
   b) Digoxin
   c) Phenytoin
   d) All of the above
   e) None of the above
3. Which factor is most likely to enhance the removal of drugs with molecular weight > 10,000 daltons?
   a) Blood flow rate
   b) Dialysate flow rate
   c) High-flux membrane
   d) Low-flux membrane
   e) None of the above
4. A newly diagnosed HIV patient scheduled for three-times-weekly hemodialysis has been started on tenofovir, a once-daily nucleoside reverse transcriptase inhibitor. Tenofovir is 7% protein-bound and excreted 70–80% unchanged in the urine. When is the best time to administer the medication?
   a) Immediately after dialysis
   b) 12 hours before dialysis
   c) 8 hours before dialysis
   d) 4 hours before dialysis
   e) Tenofovir cannot be given to patients on dialysis
5. What are the two primary determinants for the ability of membranes to remove drugs and solutes?
   a) Blood and dialysate flow rates
   b) Flow rate and surface area
   c) Pore size and surface area
   d) Dialysate flow rate and pore size
   e) Surface area and newer, high-flux membranes
6. Mr. JP is a 47-year-old patient with a history of generalized tonic-clonic seizures for which he takes phenytoin. He is stable at his phenytoin dose of 100 mg three times daily. How can Mr. JP's phenytoin therapy be best managed?
   a) Therapeutic drug monitoring
   b) Regular follow-ups to monitor for any signs of phenytoin toxicity
   c) Regular follow-ups to monitor for therapeutic failure (e.g., seizure episode)
   d) Consider switching to extended release phenytoin for once-daily administration
   e) All of the above
7. Which drug properties can determine extent of volume of distribution (Vd)?
   a) Molecular weight
   b) Renal clearance
   c) Half-life
   d) Lipid solubility
   e) All of the above
8. Mrs. PD is a 54-year-old female with a history of hypertension for which she takes ramipril and amlodipine. She is scheduled for her three-times-weekly dialysis between 8 a.m. and 12 noon. When is the best time for Mrs. PD to take her blood pressure medications?
   a) Once daily in the morning with breakfast
   b) Once daily in the evening
   c) On non-dialysis days
   d) Only on dialysis days
   e) None of the above
9. Which factor(s) can best determine removal of low molecular weight drugs?
   a) Surface area
   b) Blood and dialysate flow rates
   c) Pore size
   d) High-flux membrane
   e) All of the above
10. Which of the following properties will make a drug more likely to be dialyzed?
    a) High lipid solubility with molecular weight of 13,000 daltons
    b) Low lipid solubility with 95% protein binding
    c) 95% protein binding and 80% renal excretion
    d) Molecular weight of 500 daltons and 65% protein binding

CONTINUING EDUCATION STUDY ANSWER FORM

CE: 2.0 HRS CONTINUING EDUCATION

Drug dosing in dialysis

Volume 26, Number 4

By Jam Bravo and Marisa Battistella

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- Complete the evaluation.
- Send only this answer form (or a photocopy) to:
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6.	a	b	c	d	e
7.	a	b	c	d	e
8.	a	b	c	d	e
9.	a	b	c	d	e
10.	a	b	c	d	

EVALUATION

	Strongly disagree				Strongly agree
1. The offering met the stated objectives.	1	2	3	4	5
2. The content was related to the objectives.	1	2	3	4	5
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2016 Award Winners

Sponsored by AMGEN

AMGEN GRANTS

Allied Health Professionals Grant: Olusegun Famure, MPH, MEd, CHE, Toronto, ON

Preceptorship/Mentorship Grant NURSING OUTREACH: Lori Harwood, PhD, RN, London, ON

Dr. Lori Harwood is a nurse practitioner in the Adam Linton Hemodialysis Unit at Victoria Hospital, London Health Sciences Centre. As part of a renal program initiative, Lori is currently working with colleagues Carolyn Ingram and Dennis Smith on clinical projects to improve vascular access outcomes and dialysis modality choices. The team is very grateful for this funding, as it will provide the program with resources to deliver advanced education to a group of nurses in London and in the region, which will enable them to function as mentors to their colleagues in order to more fully support patient-centred decision making.

Nursing Research Project Grant NOVICE: Jarrin Penny, RN, London, ON

Jarrin graduated from the Fanshawe College nursing diploma program in 1994 and received her certification in nephrology nursing from the Canadian Nurses Association in 2008. She then went on to receive an undergraduate degree in nursing from the University of Victoria in 2013, as well as earning a Certificate in Diabetes Education.

Jarrin has worked in several hemodialysis units across Southwestern Ontario, most of which have been satellite units within her region. She was the charge nurse in the Westmount Hemodialysis unit until this past year when she joined Dr. Chris McIntyre and his team in the Kidney Clinical Research Unit. She is currently a candidate for a Master of Science, Medical Biophysics at the University of Western Ontario under the supervision of Dr. McIntyre.

In her spare time, she spends time with her two teenage daughters, enjoys the odd glass of wine or beer, and makes the most of spending time with family and friends.

Sponsored by FRESENIUS MEDICAL CARE

BURSARIES AND GRANTS:

Franca Tantalo Award: Lisa Lillebuen, RN, Edmonton, AB

Sponsored by CANNT

AWARDS OF EXCELLENCE:

Clinical Practice: Mary Lewis, RN, North Vancouver, BC

Nomination letter by Sarah Thomas: I am honoured to write this letter in nomination of Mary Lewis for the CANNT Award of Excellence in Clinical Practice. I can think of no better person to receive this award.

Mary has taken on many roles throughout her 30-year nursing career including hemodialysis nurse, patient educator, kidney care clinic coordinator, and clinical nurse leader. She completed her BSN (Hons) in 1985 and obtained her Certification in Nephrology (U.K.) from Guys Hospital, London, England, in 1988. After moving from the U.K. in 1989, Mary started employment at Providence Health Care in Vancouver, B.C., and is currently employed as a home hemodialysis (HHD) clinical nurse leader.

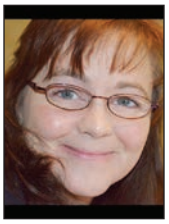
Since 2003, I have worked with Mary while in her current role as HHD clinical nurse leader. In this role, Mary constantly strives to deliver patient-centred, evidence-based care for her patients. She individualizes her patient care and teaching to meet the unique needs of each individual and their family. This was recently evidenced by the endless hours Mary spent working with an Aboriginal patient whose biggest desire was to dialyze at home. This was a challenging situation, as many health care professionals felt the patient should relocate to an urban setting. However, Mary advocated for the patient to get him home to his remote First Nation community. Mary lived up to the challenge by carefully working with the band, the First Nations Health Authority, the local outpost nurses and the family to ensure her nursing interventions could be supported in the remote community. She worked closely with the HHD team to develop a care plan that would provide the best possible outcome for both the patient and his family.

While working as a home hemodialysis clinical nurse leader, Mary has taught more than 50 patients how to perform hemodialysis independently. It is obvious that Mary enjoys teaching patients and watching them grow, as they learn to perform their dialysis on their own. Mary is eager to have her patients return home where they can reap the benefits of a more independent dialysis modality.

Mary is very involved in CANNT, most recently being part of the planning committee for the Vancouver Conference, 2015. She has also presented at CANNT, both oral and poster presentations, in 1991, 1994, 2010, 2013, and 2014. She constantly strives to improve herself by attending conferences, workshops, in-services, and by networking with her peers.

Mary is an outstanding nurse and patient educator who embodies the attributes of a strong leader and educator. I would highly recommend Mary for the CANNT Award of Excellence in Clinical Practice.

Administration/Leadership: Connie Robinson, RN, Victoria, BC



Nomination letter by Paula Cox: I wish to nominate Connie Robinson for the CANNT Award in Excellence for Administration/Leadership. Connie has been a nephrology nurse since 2004, through the British Columbia Institute of Technology/Vancouver Island Health Authority Hemodialysis Training Course. Connie is an excellent clinician who openly shares her knowledge and expertise with co-workers. She is a natural leader and mentor. Connie obtained her certification in nephrology nursing in 2010, helped create a CD for the BC Nephrology Nursing study groups, and has been an invigilator for the CNA nursing exams for three years. She seeks new learning opportunities and willingly shares newfound knowledge with her peers: CANNT Vancouver 2015, BC Kidney Days, and regular attendance at VIHA Renal Program in-services and staff meetings. With the support and encouragement of our clinical coordinator, Connie has brought forward innovations that have improved patient safety, reduced overtime, and improved patient care across several units. Recently, Connie became the Acting Clinical Coordinator for both the Victoria and Duncan Community Dialysis Units for nine months. One of her larger projects was the successful implementation of new Fresenius machines—from planning, to ordering supplies, and staff training. This was a seamless transition and an enjoyable learning opportunity for all. She obtained further Fresenius training as an on-site expert. In the Cumberland Dialysis Unit Right-Sizing project, Connie helped downsize the unit while meeting the needs of patients and staff. At Victoria Community Dialysis Facility, Connie created a daily worksheet for staff and patients, providing for an even workload and safe, efficient patient care. During accreditation, Connie played an active role in communicating and implementation. She is the Hand Hygiene Educator/Auditor for the unit. She has also developed two vacation lines and a Christmas schedule—the latter being quite a puzzle to sort out all the nuances—again, while maintaining safety, efficiency, and equity of workload. Recently, Connie completed 10 leadership courses through VIHA. She is also involved in a validation project for a new dialysis acuity scale for PROMIS, the provincial renal database. Connie sets a tone of professionalism, care, and enjoyment in the work environment. She is genuine and interested in patients and staff, and creates opportunities for others to learn and grow. She is an asset to the Victoria Community Dialysis Unit, the VIHA Renal Program, and is an inspiration for nurses. I think Connie is deserving and worthy of such a nomination.

Education: Maria Finney, RN, Richmond, BC

Nomination letter by Michelle Trask: It is a huge honour to nominate Ms. Maria Finney for a CANNT Award of Excellence in Education. Ms. Finney is a dedicated team member on our hemodialysis unit. She is well respected by her colleagues, as well as the entire inter-professional team. During her time on our unit as a senior staff nurse, she has stepped up to the plate countless times to support the team in many roles. She has worked as a mentor for learners, students, and staff in many capacities, particularly using her cannulation skills and advanced knowledge in complex wound care. Covering for clinical leadership roles to support nursing practice on our unit at short notice. She willingly takes on other duties to assist the leadership team by coordinating the evening clinics and sharing her opinions and views for quality improvement.

Above all, Maria is most deserving of this award due to her work with patient education. Maria has worked as our Patient Navigator assisting patients to wayfind through our complex system with caring and compassion. In this role, she has educated patients with diverse needs and circumstances on options, so that they can make the best-informed choices possible. She has also helped develop the teaching pathway for patients who are able to engage in self-care on our in-centre unit. This led to her being awarded a temporary role as patient educator. As patient educator, Maria spent one-on-one time with patients assisting them to enhance their self-care skills with the long-term goal of helping to improve their health outcomes. After attending Maria's teaching sessions, all of the patients who received teaching from her are still performing aspects of their dialysis independently.

A valued member of the team, Maria enjoys being a patient educator, as well as sharing her knowledge and expertise with her colleagues. Her endeavours in these domains have helped us to transform our unit and shift our focus towards care that is more people-centred.

CANNT JOURNAL AWARD:

Are you SURE about your vascular access? Exploring factors influencing vascular access decisions with chronic hemodialysis patients and their nurses by *Mary Ann Murray, PhD, RN, Alison Thomas, MN, RN(EC), Ron Wald, MDCM, MPH, FRCPC, Rosa Marticorena, BScN, RN, DCE, Sandra Donnelly, MDCM, MSc, FRCPC, and Lianne Jeffs, PhD, RN, Toronto, ON*

BURSARIES AND GRANTS

CANNT Research Grant: Ann Jones, MN, RN(EC), Toronto, ON

Ann Jones has been a nurse practitioner in a dynamic hemodialysis program at St. Michael's Hospital for the past nine years. She has been a nephrology nurse for almost 25 years where her roles have included staff nurse in PD, IPD, and hemodialysis, Clinical Nurse

Specialist, and Home Dialysis Liaison Nurse. Ann completed her Post Master's NP Diploma Program at the University of Toronto where she holds an Adjunct Clinical Appointment in the Lawrence S. Bloomberg Faculty of Nursing.

As an NP, Ann looks for the "teachable moments" during rounds in the hemodialysis unit, as she collaborates with members of the team. She has co-mentored NP students and NPs with an interest in hemodialysis, and has facilitated nephrology review sessions in collaboration with the interprofessional team to support registered nurses interested in writing the Canadian Nurses Association certification exam in nephrology. She has a strong interest in safety initiatives such as foot ulcer prevention and the falls prevention among hemodialysis patients.

In the present study, "Perception of the nurse practitioner role by healthcare professionals in hemodialysis," Ann and co-investigators plan to determine the impact of the NP role in a setting where complex issues are prevalent and promoting effective care is the goal. The research team is grateful to CANNT for its sponsorship of this research initiative.

CANNT POSTER AWARDS:

First place: *Integrating simulation technology into hemodialysis nursing orientation program* by Kathryn Walton, BScN, RN, Paula Gaspar, MSN, RN, and Janet Vogel, BScN, RN, London, ON

Second place: *Understanding your peritoneal dialysis clinic blood values* by Claire Bilik, BASc, Nancy Woodcock, RD, and Janet Robinson, RN, London, ON

Third place: *High flow cardiac output failure* by Cheryl Carleton, RN, Jo-Anne van Rootselaar, BScN, RN, Arleen Avendano, RN, and Marlene Sulliva, RN, Calgary, AB

NOTICE BOARD

Canadian Nurses Association (CNA) exam timeline.
https://www.nurseone.ca/certification/renewing-your-certification#sthash.IDBqg5i7.dpuf

SPRING 2017

- **January 3–March 1, 2017:** initial exam or renewal by exam application window
- **May 1–15, 2017:** exam period

FALL 2017

- **June 1–September 1, 2017:** initial exam or renewal by exam application window
- **November 1–15, 2017:** exam period
- **January 3–November 30, 2017:** application window to renew by continuous learning

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- March 9, 2017. World Kidney Day: Kidney Disease and Obesity. **www.worldkidneyday.org**
- March 11–14, 2017. Annual Dialysis Conference (ADC) Conference, Long Beach Convention and Entertainment Center, Long Beach, CA. **www.annualdialysisconference.org**
- April 7–10, 2017. American Nephrology Nurses' Association (ANNA) National Symposium, Marriott Wardman Park, Washington, DC. **www.annanurse.org**
- June 3–6, 2017. 54th European Renal Association – European Dialysis and Transplant Association (ERA- EDTA) Congress, IFEMA Feria de Madrid, Madrid, Spain. **www.era-edta2017.org**
- September 9–12, 2017. 46th Annual European Dialysis and Transplant Nurses Association/ European Renal Care Association (EDTNA/ERCA) International Conference, Krakow Congress Center, Krakow, Poland. **www.edtna-erca.com**
- September 20, 2017. Nephrology Health Care Professionals' Day
- October 19–21, 2017. Canadian Association Nephrology Nurses and Technologists (CANNT) 49th National Symposium 2017—Charting our Course: Setting Sail for the Future, Halifax, Nova Scotia. **www.cannt.ca**
- October 31–November 5, 2017. The American Society of Nephrology (ASN) 2017 Kidney Week, Morial Convention Center, New Orleans, Louisiana. **www.asn-online.org**

PROFILING...

New CANNT Board Members

CAROLYN INGRAM, VICE-PRESIDENT CENTRAL

Carolyn has been a nephrology nurse for 16 years, initially starting her career with the multi-organ transplant unit at London Health Sciences Centre where she worked for 10 years. Carolyn has worked in a busy hemodialysis unit and has spent three years in the peritoneal dialysis program, where she recognized her love of teaching. Carolyn returned to school to study adult education at the University of Western Ontario. She hopes to complete a Master in Adult Education in the future.

Carolyn currently works as the Nurse Navigator for the LHSC renal program. In this role, Carolyn recognizes the importance of making sure that patients are getting the most up-to-date, evidence-based information to make the best possible decision for themselves.

Carolyn has supported two groups of LHSC registered nurses to achieve their CNA certification in nephrology. Carolyn believes deeply in all efforts to support nurses to continue learning and value their important role in supporting people with chronic illness to live their best lives.

RICK LUSCOMBE, VICE-PRESIDENT ATLANTIC

Rick Luscombe is the Vascular Access Clinical Nurse Leader (CNL) at Providence Health Care and, together with the healthcare team, is responsible for ensuring optimal vascular access outcomes in renal patients. Rick has worked for 30 years in nephrology nursing with 28 of those years working in hemodialysis and the most recent 13 as Vascular Access CNL. He obtained his registered nurse diploma in 1985 from George Brown College in Toronto and his Bachelor of Science in Nursing degree in 2002 from the University of Victoria. Rick co-founded the Vascular Educators Group of BC and was the president of the Canadian Association of Nephrology Nurses and Technologists (CANNT) in 2010. In 2013, Rick was awarded the Excellence in Nursing Education Award from the Canadian Registered Nurses of British Columbia (CRNBC). In 2014, he was the recipient of the CANNT Award for Excellence in Leadership and Administration. In 2015 Rick was also awarded the Wilma Crockett Memorial Award of British Columbia from the Provincial Renal Program.

MICHELLE TRASK, DIRECTOR OF COMMUNICATIONS

Michele Trask is a registered nurse with more than 12 years of leadership experience. Michele is employed at present as a Senior Clinical Planner at Providence Health Care in Vancouver, B.C., and is an Adjunct Professor at the School of Nursing at University of British Columbia. She is passionate about advancing self-care options to help place patients at the centre of all we do.

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❑ Technician
❑ Technologist
❑ Other (Specify) _____

Number of years in nephrology _____

Area of responsibility
❑ Direct Patient Care
❑ Administration
❑ Technical
❑ Teaching
❑ Research
❑ Other (Specify) _____

Work environment
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❑ Self-Care Unit
❑ Independent Health Care
❑ Private Sector

Highest level of education

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❑ Baccalaureate	❑ Baccalaureate
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❑ Doctorate	❑ Doctorate

I am at present studying toward

Nursing	*Non-Nursing*
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❑ Master's	❑ Master's
❑ Doctorate	❑ Doctorate

Primary area of practice
Choose one
❑ Adults
❑ Combined Adult/Pediatrics
❑ Pediatrics
❑ Other

Select all that apply
❑ Full-Care Hemo
❑ Self-Care Hemo
❑ Home/Independent Hemo
❑ In-Patient Nephrology
❑ In-Patient Peritoneal Dialysis
❑ In-Patient Transplantation
❑ Home/Independent PD
❑ Out-Patient Transplantation
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