CANNT|ACITN
Canadian Association of Nephrology Nurses and Technologists
l'Association canadienne des infirmières et infirmiers et des technologues de néphrologie

CANNT JOURNAL
JOURNAL ACITN

Volume 31, Issue 3 July–September 2021

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Letter from the Editors

At this time last year, the team behind your *CANNT Journal* made the commitment to uphold our tradition of providing quality educational opportunities amidst rounding out the first year living with the pandemic – we called this period our *next* normal. Well, we are definitely firmly entrenched in the *new* normal state fraught with complications such as the vaccination divide that has the potential to render us fractured in so many ways. The theme of the upcoming CANNT Virtual Conference Series on October 19 to December 2, 2021, is *Resilience in a Time of Change*, which reflects how all of us involved in nephrology practice are likely feeling at this very moment. It is testament to our resilience that we continue to provide uninterrupted quality kidney care to our patients – kidney failure does not care whether there is a pandemic outside of the walls of the location of care. In this spirit, we look forward to showcasing the diverse topics in the upcoming virtual conference series. We encourage you to partake of what the collective nephrology nursing and technological communities have to offer. We have a lot of hidden talents out there, and it is always a rewarding experience to work with both novice and experienced presenters, and showcase their talents.

In this journal issue, we glean valuable insight on process improvement from Famure et al. (2020) in their installment entitled *Summative review of the kidney transplant evaluation process – Insights from a Canadian kidney transplant program*. The authors present how the number of visits to the hospital after referral for transplant assessment and the total length of the evaluation process can be reduced by streamlining the roles of stakeholders involved in the pre-transplant evaluation process. Additionally, we have included the abstracts for the virtual webinar series for your review. We are confident that the range of topics for presentation will appeal to the diverse interests in the *CANNT Journal* readership.

Finally, we would like to acknowledge the contributions that our outgoing CANNT President, Janice Mackay, has made over the past five years. Janice has been indefatigable in her pursuit of excellence in advocating for the CANNT organization. For those of us who had the pleasure of working with her over the years, we will miss Janice's dynamic but dogged approach to getting things done. She embodies the passion for excellence and generous volunteerism that characterize your CANNT Board of Directors. Janice, we thank you for your leadership.

Similarly, our Director of Communications, Ethan Holtzer, will be leaving his role. Ethan has been very instrumental in getting the CANNT brand out there. We will miss his razor-sharp perspective on how to bring any initiative to its full completion. Ethan, we thank you as well for your leadership and for grounding us.

Sincerely,

Jovina Bachynski, MN, RN(EC), CNeph(C), PhD(Student)

Rosa M. Marticorena, BScN, RN, CNS, CNeph(C), DClinEpi, PhD

Co-editors, *CANNT Journal*

Message des rédactrices en chef

À cette même période l'an dernier, l'équipe de la *Revue de l'ACITN* s'engageait à honorer la tradition et à continuer d'offrir des occasions de formation de qualité, tout en bouclant cette première année de pandémie, période que nous avons nommée la « prochaine normalité ». Eh bien, nous sommes sans aucun doute fermement ancrés dans la *nouvelle* normalité, caractérisée par des complications telles que le fossé vaccinal, qui a le potentiel de nous diviser sur de très nombreux plans. L'imminente série de conférences virtuelles de l'ACITN, qui se déroulera du 19 octobre au 2 décembre 2021, a pour thème « *Resilience in a Time of Change* » (La résilience en période de changement), ce qui reflète probablement les sentiments qu'éprouve toute personne qui travaille dans le domaine de la néphrologie. Le fait que nous ayons continué d'offrir à nos patients en néphrologie des soins de qualité ininterrompus témoigne de cette résilience. Après tout, l'insuffisance rénale se soucie assez peu qu'il y ait une pandémie à l'extérieur des murs du milieu de soins. Dans cet esprit, nous sommes impatients de présenter les divers sujets de la série de conférences virtuelles à venir. Nous vous encourageons à prendre part à ce que les communautés collectives des soins infirmiers et de la pratique technologique en néphrologie ont à offrir. Le domaine regorge de talents cachés, et le fait de travailler avec des présentateurs débutants ou expérimentés et de présenter leurs talents s'avère toujours une expérience enrichissante.

Dans ce numéro, nous glanons de précieuses informations sur l'amélioration des processus, tirées de l'article intitulé *Summative review of the kidney transplant evaluation process – Insights from a Canadian kidney transplant program* (Famure et coll., 2020). Les auteurs y expliquent en quoi le nombre de visites à l'hôpital en vue d'une évaluation préalable à la transplantation, de même que la durée totale du processus d'évaluation, peut être réduit en simplifiant les rôles des intervenants qui participent au processus. En outre, nous avons inclus les résumés de la série de webinaires virtuels afin que vous puissiez les passer en revue. Nous avons la conviction que la gamme de sujets présentés comblera les intérêts variés du lectorat de la *Revue de l'ACITN*.

Enfin, nous tenons à souligner les contributions de notre présidente sortante, Janice MacKay, au cours des cinq dernières années. Janice a travaillé sans relâche pour représenter l'ACITN avec un professionnalisme exemplaire. Ceux et celles d'entre nous qui ont eu le plaisir de travailler avec Janice au fil des années se souviendront d'elle pour son approche dynamique et tenace, ainsi que pour sa détermination à réaliser des choses concrètes. Elle incarne le désir d'excellence et la générosité qui caractérisent les membres bénévoles du conseil d'administration de l'ACITN. Nous la remercions d'avoir dirigé l'association avec autant de brio.

De la même façon, notre directeur de communications, Ethan Holtzer quittera son poste. Ethan a joué un rôle très important dans la mise en valeur de la marque ACITN. Son point de vue tranchant sur la façon de mener à bien toute initiative nous manquera. Ethan, nous te remercions aussi pour ton leadership et pour nous avoir ancrés.

Sincèrement,

Jovina Bachynski, M. Sc. inf., inf. prat. (adulte), CNéph(C), étudiante au doctorat

Rosa M. Marticorena, B. Sc. inf., inf. aut., CNéph(C), D.E.S. Épidémiologie clinique, Ph.D.

Corédactrices en chef, *Revue de l'ACITN*

Le ***Journal ACITN*** est la publication officielle de l'Association canadienne des infirmiers/infirmières et technologues en néphrologie, a/s 4, rue Cataraqui, bureau 310, Kingston (Ontario) K7K 1Z7.

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Message from the President

Dear colleagues, fellow Board members, and our Events and Management team,

It does not matter how slowly you go as long as you do not stop – Confucius

As I sit to write my final president's message to you, I am finding it hard to sum up my thoughts, experiences, personal growth, and our CANNT accomplishments over these past five years. I can start by sincerely thanking every one of you for giving me this opportunity. I suppose that it is common that when a person who has served in a leadership position steps down, that their thoughts move into a period of reflection. Thinking of what went well, what could have been done differently, and the many action items yet to be seen through to success. I am so fortunate to have led this association with the grateful support of our Events and Management team, our volunteer Board of Directors, and you, our membership.

It is immensely satisfying to look back and read my previous 11 *CANNT Journal* President's Messages and eight President-Elect Messages and realize the work that your association leadership team has accomplished. Wow, here's a brief run down:

- ✓ Hired a new association management team
- ✓ Created new CANNT logo
- ✓ Developed and launched a new CANNT website
- ✓ Updated the CANNT Resource Manual
- ✓ Reviewed/updated CANNT bylaws
- ✓ Reviewed/updated the *Technical Standards*, *Nursing Standards*, and *Vascular Access Standards*
- ✓ Created MOUs with the following partner associations: Renal Society of Australasia (RSA); Renal Administrative Leaders Network of Ontario (RALNO); International Society of Nephrology (ISN); Vascular Access Society (VAS); Canadian Society of Nephrology (CSN).

I can unreservedly say that these accomplishments could not have been reached without the leadership and dedication of your elected volunteers (Board of Directors) and commitment from your Events and Management team. I thank you for your service!

I have gained a wealth of experience, friendships, skills, and memories being a part of the CANNT Board. Ethan Holtzer, Patty Quinan, Deidra Goodacre, Bettiann Curran, Jerrica McKinnon, Shripal Parikh, Rosa Marticorena, Jovina Bachynski, Pamela Lyons, Megan Lyons, Jennifer McCann, and Sarah Seward…you are the definition of what makes a great team. Your trust, and willingness to share ideas, roll up your sleeves, and commit all that you can have helped to sustain the ongoing endurance, growth, and strength of the Canadian Association of Nephrology Nurses and Technologists.

I would like to congratulate and wish Cathy Cake much success in her upcoming role as your new CANNT President. Cathy will no doubt continue to provide stellar leadership and guidance in achieving the objectives of your CANNT association. We are extremely fortunate to have her advancing to President. It has been an honest pleasure working with you over these years, Cathy.

I would like to thank Ethan Holtzer for his work as our Director of Communications. His creativity, critical thinking, and business acumen have moved our association forward in many ways. I have enjoyed working with you and wish you the best of everything. I would like to extend a warm welcome to our incoming President-Elect/Treasurer and Director of Communications, and thank them in advance for taking on these roles with CANNT.

We made the difficult decision to cancel our in-person national CANNT conference again this year. I sincerely hope that many of you will attend our CANNT 2021 Virtual Conference Series. The theme of *Resilience in a Time of Change* fits well with the

multitude of challenges that each of you have had to overcome or manage during the ongoing pandemic. I look forward to seeing you all in person at the CANNT annual conference in Hamilton 2022. I am forever optimistic that this will happen for us.

I would also like to take this opportunity to thank our industry sponsors for their generous support of our upcoming 2021 Virtual Conference Series, webinars, in-kind support, and supportive partnership opportunities. We truly value their commitment to support the ongoing success of CANNT through providing educational opportunities and in-kind support.

Just a reminder to those nurses who are considering writing their CNA certification in nephrology: You can receive the voucher code from CANNT to receive a 20% discount on the cost if you are a CANNT member. The discount can be applied to the CNA member rate or the non-member rate of either the initial exam fee or the recertification fee.

Whether you are interested in building your Nephrology network, advancing your nephrology practice, or expanding your knowledge, then please consider becoming a member of CANNT. I am tremendously excited to continue as a member of CANNT and look forward to supporting this great association.

Thoughtfully,
Janice MacKay,
CANNT President,
2018-2021

NOTICE BOARD

	Fall 2021
Initial exam or renewal by exam application window	**June 1-September 1, 2021**
Certification exam window	**November 1-15, 2021**
Renewal by continuous learning application window	**January 14 – November 1, 2021**

N.B. CNA will provide 20% discount for initial exam writers, renewal exam writers, and renewals by continuous learning in 2021 to active members of CANNT. Contact cannt@cannt.ca for the voucher code in 2021.

- **October 19-December 2, 2021**. Canadian Association Nephrology Nurses and Technologists (CANNT) 52nd Annual Conference 2021, Virtual Conference every Tuesday and Thursday, 2:30 p.m. – 3:30 p.m. ET and 6:30 p.m. – 7:30 p.m. ET More details coming soon! **www.cannt.ca**

- **November 2-7, 2021.** American Society of Nephrology (ASN) 2021 Kidney Week, San Diego Convention Center, San Diego, CA. **https://www.asn-online.org/education/kidneyweek/archives/future.aspx**

CANADIAN NURSES ASSOCIATION

Nephrology Certification Registration Status Report 2021

Initial and Renewal by Exam to Renew in 2021	Renewal by Continuous Learning (CL) Hours	Total of Initials and Renewals	Due
80	52	132	186

Le mot de la présidente

Il n'est pas très grave que vous avanciez lentement, tant que vous ne vous arrêtez pas – Confucius

Chers collègues, membres du conseil d'administration et membres de l'équipe de gestion des événements,

Me voilà installée à mon bureau pour rédiger mon dernier message en tant que présidente, et je trouve assez ardu de résumer mes réflexions, mes expériences, mes réalisations personnelles et les réalisations de l'ACITN tout au long des cinq dernières années. Je peux commencer par remercier sincèrement chacun et chacune d'entre vous de m'avoir offert cette chance. Je suppose qu'il est normal, pour une personne qui a occupé un poste de direction, de vivre une période de réflexion lorsqu'elle quitte son poste. De réfléchir aux progrès accomplis, à ce qui aurait pu être fait différemment et aux nombreuses mesures qui doivent toujours être mises en œuvre. Je m'estime très chanceuse d'avoir dirigé cette association, avec le soutien reconnaissant de notre équipe de gestion des événements, des membres bénévoles de notre conseil d'administration et de nos membres.

J'ai eu la grande satisfaction, dans le cadre de ma rétrospection, de réaliser tout le travail accompli par notre équipe de direction à la relecture de mes onze précédents messages de la présidente parus dans la Revue de l'ACITN et de mes huit messages à titre de présidente désignée. Voici donc un bref résumé des progrès accomplis au cours des cinq dernières années :

- ✓ Embauche d'une nouvelle équipe de gestion de l'association
- ✓ Création d'un nouveau logo de l'ACITN
- ✓ Création et lancement d'un nouveau site Web de l'ACITN
- ✓ Mise à jour du manuel de ressources de l'ACITN
- ✓ Révision et mise à jour des règlements administratifs de l'ACITN
- ✓ Révision et mise à jour des Normes de pratique infirmière en néphrologie, des Normes de la pratique technologique en néphrologie et des normes en matière d'accès vasculaire
- ✓ Création de protocoles d'entente avec les associations partenaires suivantes : Renal Society of Australasia (RSA); Renal Administrative Leaders Network of Ontario (RALNO); International Society of Nephrology (ISN); Vascular Access Society (VAS); Société canadienne de néphrologie (SCN)

Je peux affirmer sans aucun doute que ces réalisations n'auraient pas pu être possibles sans le leadership et le dévouement de vos bénévoles élus (le conseil d'administration) et sans l'engagement de votre équipe de gestion des événements. Je vous remercie de tout ce travail!

Dans le cadre de mes fonctions au sein du conseil d'administration de l'ACITN, j'ai acquis une vaste expérience et une multitude de compétences et de souvenirs, en plus d'avoir noué de nombreuses nouvelles amitiés. Ethan Holtzer, Patty Quinan, Deidra Goodacre, Bettiann Curran, Jerrica McKinnon, Shripal Parikh, Rosa Marticorena, Jovina Bachynski, Pamela Lyons, Megan Lyons, Jennifer McCann et Sarah Seward… vous êtes l'incarnation même de l'esprit d'équipe. Votre confiance et votre volonté de partager des idées, de vous retrousser les manches et de donner tout ce que vous avez ont contribué à alimenter l'endurance, la croissance et la force perpétuelles de l'Association canadienne des infirmières et infirmiers et des technologues de néphrologie.

Je tiens à féliciter Cathy Cake et à lui souhaiter la meilleure des chances dans ses prochaines fonctions à titre de nouvelle présidente de l'ACITN. Cathy continuera sans aucun doute à assumer la direction et la supervision de l'ACITN de manière exemplaire dans le but d'atteindre les objectifs de notre association. Nous sommes extrêmement chanceux de la voir accéder au poste de présidente. En toute sincérité, ce fut un immense plaisir que de travailler avec elle pendant toutes ces années.

J'aimerais également remercier Ethan Holtzer pour son travail au poste de directeur des communications. Sa créativité, sa pensée critique et son sens des affaires ont permis à l'association de progresser sur plusieurs plans. J'ai beaucoup aimé travailler avec Ethan, et je lui souhaite la meilleure des chances dans tous ses projets. Je souhaite chaleureusement la bienvenue à notre prochaine présidente désignée et trésorière, ainsi qu'à notre nouvelle directrice des communications, et je les remercie d'avoir accepté ces rôles au sein de l'ACITN.

Nous avons pris la décision difficile d'annuler notre congrès national de l'ACITN en personne encore une fois cette année. J'espère sincèrement que vous serez nombreux et nombreuses à participer à notre série de conférences virtuelles de l'ACITN de 2021. Le thème de cette série, « Resilience in a Time of Change » (La résilience en période de changement), n'aurait pu être mieux choisi étant donné la multitude de défis que chacun et chacune d'entre vous ont dû surmonter ou gérer en ces temps de pandémie. J'ai hâte de vous voir en personne au congrès annuel de l'ACITN, qui devrait se tenir à Hamilton en 2022. J'espère sincèrement que cette rencontre pourra avoir lieu, et je demeure optimiste!

Je profite également de cette occasion pour remercier nos commanditaires de l'industrie pour leur généreuse contribution à notre série de conférences virtuelles de 2021 et aux webinaires, pour leur soutien matériel et pour les occasions de partenariat. Nous leur sommes très reconnaissants de leur contribution au succès continu de l'ACITN grâce à l'offre d'occasions d'apprentissage ainsi qu'au soutien matériel.

Je souhaite rappeler aux infirmières et aux infirmiers qui envisagent de passer l'examen de certification de l'AIIC en néphrologie que vous pouvez recevoir un code promotionnel de l'ACITN, qui vous offre un rabais de 20 % sur les frais si vous êtes membres de l'association. Le rabais peut être appliqué au tarif des membres de l'AIIC ou au tarif pour les non-membres, qu'il s'agisse des frais d'examen initial ou des frais de recertification.

Que vous souhaitiez vous tisser un réseau en néphrologie, faire progresser votre pratique dans le domaine ou approfondir vos connaissances, je vous invite à songer à devenir membre de l'ACITN. Je suis très heureuse de poursuivre mon travail en tant que membre de l'ACITN et je me réjouis à l'idée de soutenir cette formidable association.

Bien à vous,
Janice MacKay,
Présidente de l'ACITN 2018-2021

Your Board in Action

It is with great pleasure that I report on behalf of the CANNT Executive Board members. This past year will be remembered for the COVID-19 pandemic, which mandated our association to change the way we serve our nephrology community to fully prepare our members to navigate the pandemic. We have responded and, for the second consecutive year, we moved our annual in-person symposium to a virtual series and increased the number of educational webinars provided throughout the year. Although moving to video communication was a learning curve for most, including myself, and required a crash course in Zoom©, it did have its benefits. We were able to increase the diversity of speakers such as Dr. Kitrou's live presentation from Greece on percutaneous radiofrequency-based AV fistula creation. It also increased flexibility, thus allowing us to offer sessions twice a day, and it also allowed our members access from home. Based on your feedback, we have determined that last year's virtual conference was successful and met the high-quality standard demanded by our members. We partnered with other professional nephrology groups, such as the Canadian Society of Nephrology, to address practice issues related to the pandemic. We will continue to address your needs to reflect the current post pandemic landscape, as well. For example, we have collaborated with the Canadian Nurses Association to provide education and initiatives regarding vaccination hesitancy. We will work diligently to ensure our current educational offerings remain relevant with a more hybrid approach to increase accessibility into the future. Please visit our website (**www.CANNT.ca**) to keep informed of all upcoming events.

We would be remiss if we did not recognize your resiliency during this time in your continued commitment to deliver high-quality care and develop your professional education. We recognize that your increased workload and mental stress throughout the past two years have created challenges and difficulties in meeting your professional education responsibilities. We commend your dedication to continued education and applaud your commitment to lifelong learning, as we navigate these trying times.

This year brings change within our executive team, as we say farewell to our President, Janice Mackay. She has been instrumental in not only sustaining CANNT, but moving our organization forward with her unique ability to influence and inspire action in everyone around her. Under her leadership, the *Nephrology Nursing Standards*, *Technological Standards*, and *Vascular Access Standards* have been revised to reflect our changing nephrology nursing and technological practice. With her vision and drive, she has supported innovation throughout the pandemic with our Virtual Conference Series, the development of the *Nurse Practitioner Nursing Standards*, and Green Dialysis. Janice, it has been a pleasure to serve with you, and your mentorship has been invaluable. As the first president from Newfoundland, I will strive to represent CANNT with the same commitment and high standards.

Ethan Holtzer, our Director of Communications, is also coming to the end of his term and, on behalf of the executive team, we want to acknowledge his dedication and applaud his accomplishments over the past few years. We are in awe of your success in promoting communication and engagement of our members through the various social media platforms and building collaborative relations with the Renal Administrator Leaders Network of Ontario (RALNO) and other professional nephrology groups. Please join me in wishing both Janice and Ethan all the best in their future endeavours!

MEMBERSHIP

At present, our membership is low, but with the announcement of our upcoming CANNT Virtual Series ("Resilience in a Time of Change"), we anticipate an increase in membership over the next few weeks. We would like to take this opportunity to thank Events and Management Plus, our administrative team, who work tirelessly to serve our members and make this event possible. Membership is vital for the continued success of CANNT, and we will continue to strive to add value to our membership. Please contact your regional representative or the CANNT office to ensure that your needs are met and your voice is being heard. Together we can make a difference!

JOURNAL

Guidelines for journal article submission can be found under the *CANNT Journal* section on the CANNT website (**https://cannt-acitn.ca/cannt-journal/**). Please email your manuscripts to Rosa Marticorena or Jovina Bachynski at **CANNT.journal1@gmail.com**. The *CANNT Journal* is published four times a year in electronic version. Scientific articles are peer reviewed, and manuscripts that present new clinical information or address clinical practice issues of special interest to nephrology nurses and technologists, are accepted. There is also the opportunity for industry partners for sponsored education and advertising.

COMMUNICATION

We continue to develop new strategies to promote engagement and communication of timely and relevant information with our members. The *CANNT Connection*, our bimonthly email, is one successful means of communication that provides strategic personalized information on a continue basis. If you have an idea, question, an event to promote please contact Ethan Holtzer, our Director of Communications.

CANNT website (**www.CANNT.ca**)
Twitter CANNT (@CANNT1)

FINANCES

We are a not-for-profit professional association, with the objective of providing value to our members, which aligns with our mission and vision. We and our management team continue to explore collaborative and lucrative relationships to assist in the viability of our association.

Sincerely,

Cathy Cake
CANNT President-Elect/ Treasurer 2020-2021

Votre conseil en action

J'ai le grand plaisir de faire le point sur les activités de l'organisation, au nom des membres du conseil d'administration de l'ACITN. La dernière année aura été marquée par la pandémie de COVID-19, qui a obligé notre association à modifier les services offerts à la communauté de néphrologie afin que nos membres soient bien préparés à relever les défis engendrés par cette situation. Nous avons donc pris les mesures nécessaires et, pour la deuxième année consécutive, nous avons remplacé notre congrès annuel par une série de conférences virtuelles, en plus d'augmenter le nombre de webinaires de formation offerts tout au long de l'année. Bien que la communication vidéo ait exigé un certain temps d'adaptation pour la plupart d'entre nous – moi comprise – et que ce mode de communication ait nécessité un cours accéléré sur la plateforme Zoom, nous y avons trouvé nombre d'avantages. Nous avons pu diversifier notre offre de conférences, notamment avec la présentation en direct du Dr Kitrou, établi en Grèce, sur la création d'une fistule artérioveineuse sur radiofréquence par voie percutanée. Cela a également créé une plus grande flexibilité, ce qui nous a permis d'offrir des séances deux fois par jour, sans compter que les membres ont pu accéder à ces séances à partir de chez eux. À la lumière de vos commentaires, nous avons pu confirmer que la conférence virtuelle de l'an dernier avait été couronnée de succès et qu'elle répondait aux normes de qualité élevées exigées par nos membres. Nous avons établi des partenariats avec d'autres groupes de professionnels en néphrologie, comme la Société canadienne de néphrologie, afin d'aborder certaines difficultés occasionnées par la pandémie pour ce qui est de la pratique. Nous continuerons de répondre à vos besoins afin de refléter le contexte postpandémique actuel également. Par exemple, nous avons collaboré avec l'Association des infirmières et infirmiers du Canada pour offrir des documents d'information et proposer des initiatives concernant la réticence à la vaccination. Nous travaillerons avec diligence pour nous assurer que nos formations actuelles demeurent pertinentes, et nous avons adopté une approche hybride pour en améliorer l'accessibilité. Veuillez consulter notre site Web (**www.CANNT.ca**) pour connaître tous les événements à venir.

Nous tenons également à souligner votre résilience pendant cette période, de même que votre détermination continue à offrir des soins de grande qualité et à poursuivre vos activités de perfectionnement professionnel. Nous sommes conscients du fait que votre charge de travail accrue et le stress mental accumulé au cours des deux dernières années ont fait en sorte qu'il vous a été plus difficile de vous acquitter de vos responsabilités en matière de formation professionnelle. Nous vous félicitons donc de vos efforts et de votre engagement à l'égard de la formation et de l'apprentissage continus en cette période difficile.

Cette année sera marquée par des changements importants au sein de notre équipe de direction, avec le départ de notre présidente, Janice MacKay. Janice a largement contribué à assurer la pérennité de l'ACITN, mais aussi sa croissance, grâce à sa faculté unique d'inspirer les gens qui l'entourent et de les inciter à poser des gestes concrets. Sous sa direction, les Normes de pratique infirmière en néphrologie, les Normes de la pratique technologique en néphrologie et les normes en matière d'accès vasculaire ont été révisées afin de refléter la constante évolution des soins infirmiers et de la pratique technologique en néphrologie. Grâce à sa vision et à son sens de l'initiative, elle a encouragé l'innovation tout au long de la pandémie avec notre série de conférences virtuelles, l'élaboration de normes de soins infirmiers pour les infirmières praticiennes et la mise en œuvre du projet Green Dialysis. Ce fut un réel plaisir de travailler avec Janice et ses qualités de mentore ont été d'une importance inestimable. En tant que première présidente issue de Terre-Neuve-et-Labrador, je m'efforcerai de représenter l'ACITN avec le même engagement et les mêmes normes élevées.

Ethan Holtzer, notre directeur des communications, arrive également à la fin de son mandat. Au nom de tous les membres de l'équipe de direction, je tiens à souligner son dévouement et à le féliciter pour ses nombreuses réalisations au cours des dernières années. Il est admirablement parvenu à promouvoir la communication et l'engagement parmi nos membres sur les diverses plateformes de médias sociaux, en plus de créer des relations de collaboration avec le Renal Administrative Leaders Network of Ontario (RALNO) et d'autres groupes de professionnels en néphrologie. Souhaitons à Janice et à Ethan la meilleure des chances dans leurs projets!

ADHÉSION

À l'heure actuelle, le taux d'adhésion est assez peu élevé, mais avec l'annonce de notre série de conférences virtuelles de l'ACITN, « Resilience in a Time of Change » (La résilience en période de changement), nous nous attendons à une augmentation des adhésions au cours des prochaines semaines. Nous tenons à profiter de cette occasion pour remercier notre équipe administrative de gestion des événements (Events and Management Plus), qui travaille sans relâche pour servir nos membres et rendre cet événement possible. Le taux d'adhésion à l'ACITN constitue un aspect crucial du succès continu de notre organisation, et nous continuerons de créer de la valeur ajoutée pour nos membres. Veuillez communiquer avec votre représentant régional ou avec les bureaux de l'ACITN pour exprimer votre point de vue et faire en sorte que nous puissions répondre à vos besoins. Ensemble, nous pouvons apporter des changements concrets!

REVUE

Vous trouverez la marche à suivre pour soumettre un article à publier dans notre revue sous l'onglet « Publications », section CANNT Journal, du site Web de l'ACITN (**https://cannt-acitn.ca/cannt-journal/**). Veuillez faire parvenir vos articles à Rosa Marticorena ou à Jovina Bachynski à l'adresse **CANNT.journal1@gmail.com**. La Revue de

l'ACITN est publiée quatre fois par année sous forme électronique. Les articles scientifiques sont examinés par des pairs, et les articles qui portent sur de nouvelles données cliniques ou qui traitent de sujets présentant un intérêt particulier pour les infirmières et infirmiers et les technologues en néphrologie sont acceptés. Nos partenaires de l'industrie ont également la possibilité de commanditer des activités de formation ou de la publicité.

COMMUNICATION

Nous continuons d'élaborer de nouvelles stratégies pour promouvoir l'engagement de nos membres et leur communiquer des renseignements pertinents en temps opportun. Le CANNT Connection, notre bulletin d'information par courriel bimensuel, est un moyen de communication efficace et fournit des renseignements stratégiques personnalisés de façon continue. Si vous avez une idée, une question ou un événement à promouvoir, veuillez communiquer avec Ethan Holtzer, notre directeur des communications.

Site Web : (**www.CANNT.ca**)
Twitter CANNT (@CANNT1)

FINANCES

Nous sommes une association professionnelle sans but lucratif et notre objectif est d'offrir à nos membres une valeur ajoutée qui concorde avec notre mission et notre vision. L'équipe de direction et l'équipe des finances continuent de travailler à la création de nouvelles relations collaboratives et lucratives afin d'assurer à la viabilité de l'association.

Sincerely,
Cathy Cake
CANNT President-Elect/
Treasurer 2020-2021

Summative review of the kidney transplant evaluation process—Insights from a Canadian kidney transplant program

By Franz Marie Gumabay, Pei Xuan Chen, Heebah Sultan, Sabina Freiman, Rhonda Allan, Hashir Hamza, Colleen Elizabeth Shelton, Olusegun Famure, and S. Joseph Kim

AUTHOR NOTE

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ABSTRACT

An efficient and effective pre-transplant evaluation process is needed for Ontario transplant centres to accommodate the growing number of end-stage renal disease patients with limited healthcare resources. Using a mixed-methods approach of administrative data assessment, semi-structured interviews with healthcare providers, and self-reported cross-sectional patient surveys, the University Health Network Kidney Transplant Program conducted a summative review to assess the performance of the current pre-transplant evaluation process and to understand barriers that hinder the program. The results of this review informed a restructured pre-transplant evaluation system that successfully reduced the length of the pre-transplant evaluation process, reduced the frequency of hospital visits after referral to the transplant program, and streamlined the roles of all key stakeholders involved in the pre-transplant evaluation process.

Keywords: kidney transplantation, pre-transplant evaluation, performance metrics, quality improvement

INTRODUCTION

Kidney transplantation provides the best long-term outcomes for patients with end-stage renal disease (ESRD) and is a more cost-effective form of renal replacement therapy than dialysis (Tonelli et al., 2011; Jay et al., 2016; Manns et al., 2017; Jarl et al., 2018). While transplantation is ideal, access is limited by the availability of viable organs (Maggiore et al., 2015; Lentine & Schnitzler, 2011; Trillium Gift of Life (TGLN), 2017a; Ontario Renal Network, 2015). In Ontario, the current median time spent on the deceased donor waitlist is four years (Kidney Foundation of Canada, 2019). Longer waiting times result in longer time spent on dialysis, thereby negatively affecting the health of transplant candidates and increasing the costs and resource demands experienced by the healthcare system (Formica et al., 2012; Nitta, Hanafusa, & Tsuchiya, 2017; Meier-Kriesche & Kaplan, 2002). Provincial agencies, the Trillium Gift of Life (TGLN) and Ontario Renal Network (ORN), have partnered to increase access to transplantation by improving transplant centres' performance and increasing organ donation rates (TGLN, 2018). One metric used by TGLN to gauge the performance of transplant centres is the time patients spend in the pre-transplant evaluation process prior to being wait-listed, or the transplant evaluation period (TEP) (TGLN, 2017b).

The TEP is the time period wherein patients undergo extensive medical and psychosocial assessments to determine their transplant eligibility. Individual patient evaluation times can range from months to years, as they are dependent on a myriad of patient, referral centre, and transplant centre-related factors (National Health Service (NHS), 2013; Mucsi et al., 2017; Dageforde, Box, Feurer, & Cavanaugh, 2015; Sultan et al., 2013; Formica et al., 2012). As a result, this period can contribute significantly to the overall wait time before transplantation (Formica et al., 2012). To date, the only Canadian-based study that comprehensively assessed the performance of TEP identified 1.4 years as the average time for patients to proceed from referral to transplant eligibility determination (Sultan et al., 2013). Compounded by the time spent on the waitlist, this long wait is suboptimal from the perspective of health outcomes, patient experience, and the healthcare system (Held, McCormick, Ojo, & Roberts, 2016; Schold et al., 2014; Heldal et al., 2019; Axelrod et al., 2018).

Currently, there is a paucity of Canadian-based studies aimed at improving the efficiency of the TEP. Given the trend of growing organ donations and transplant referrals, the need for an efficient and timely evaluation process at transplant centres is imperative to accommodate this growth with limited healthcare resources. Improving the TEP will help promote better patient outcomes, maximize resource allocation among healthcare providers, and reduce healthcare system costs. The objectives of this study are (1) to assess the performance of the University Health Network (UHN) Kidney Transplant Program (KTP) in completing the TEP by measuring key time points from referral to FD, (2) to understand the challenges limiting the growth of the UHN KTP from a healthcare provider's perspective and explore kidney transplant candidates' attitudes towards the TEP, identify possible barriers, and generate potential solutions for improvement, (3) to develop and implement a system that reduces the length of the TEP and minimizes the number of visits to the hospital, and (4) to evaluate the short-term functionality of the restructured system and compare performance pre- and post-restructuring.

METHODS

A summative review was conducted to assess the pre-transplant evaluation process for patients undergoing kidney transplant assessment. This review consists of several research studies and the methods used in each study will be described below. The UHN Research Ethics Board approved all research studies requiring access to patient data. All data analyses were performed using Stata, version 12.1 (StataCorp, 2011).

1. Pre-Restructuring of the UHN KTP

Initial Assessment of the TEP

A single-centre retrospective cohort study was conducted of adult patients referred to UHN for kidney transplant assessment between January 1, 2003 and December 31, 2012, and followed-up until December 31, 2013. Patients referred for kidney-pancreas transplant evaluation were excluded because they were assessed by a different transplant program and underwent a different evaluation process. Patient data were abstracted from hospital health records and subsequently stored in the Comprehensive Renal Transplant Research Information System (CoReTRIS) after appropriate quality checks. CoReTRIS is an in-centre research database comprised of recipient, donor, transplant, treatment, and follow-up data for all patients referred to UHN for kidney transplantation as of January 2003 (Famure et al., 2014).

The primary outcome was the time to completion of three critical time periods of the TEP: (1) referral to the first visit with a transplant nephrologist (FV), (2) FV to final disposition (FD), and (3) referral to FD (Figure 2). FD was defined as the time point at which a patient's kidney transplant eligibility was determined. These time periods were chosen to explore the potential effects of centre-specific factors associated with the TEP because they represent critical landmarks in a patient's evaluation journey. Patients were determined to be either (i) suitable for transplantation and placed on the waitlist, (ii) suitable for transplantation with an identified living donor, (iii) unsuitable for transplant, or (iv) not placed on the waitlist due to patient preference. Some patients did not proceed to their FV because they were deemed unsuitable for transplant during the referral phase. Categorical variables were described using frequencies and percentages. Continuous variables were described using means (±standard deviations) for normally distributed data and medians (interquartile ranges) for non-normally distributed data. Baseline characteristics were evaluated using appropriate parametric and non-parametric statistics.

Healthcare Providers' Perspectives on the TEP

A clinical nurse specialist performed semi-structured interviews, lasting 30 to 60 minutes, with key stakeholders in the TEP over a 3.5-month period to gain a better understanding of areas limiting the growth of the KTP. Interviews were recorded and transcribed by hand to generate summative themes of the content. Stakeholders included registered nurses, transplant nephrologists, surgeons, administrative assistants, social workers, and data analysts. Consultations with UHN KTP leaders were undertaken to generate core domains of focus and develop an interview guide. Key domains explored in the interview were the utilization of program resources, the patient evaluation process, and documentation of patient and program related data. Information gathered was consolidated and later incorporated as part of a programmatic report with strategies to reform and improve the program.

Patients' Perspectives on the TEP

A cross-sectional questionnaire was distributed to patients who completed evaluation for kidney transplantation at UHN within one year of study enrolment. Patients were excluded if they were multi-organ or simultaneous transplant recipients, completed the TEP more than one year before study enrolment, or were unable to complete the questionnaire. Research staff identified eligible patients using data from CoReTRIS and hospital health records.

The questionnaire was informed by a literature review on process evaluation, patient satisfaction, and quality improvement (Picker Institute Europe, 2009), as well as

through consultations with members of the UHN KTP. The questionnaire was composed of closed- and open-ended questions that were categorized into six domains: demographics, pre-transplant assessment, suitability consultations, interventional consultations, satisfaction with the evaluation process, and suggestions for improvement. The questionnaire was distributed to eligible patients during post-transplant kidney outpatient clinic appointments between July 15, 2014 and December 31, 2016. Categorical variables were described using frequencies and percentages. Continuous variables were described using means (±standard deviations) for normally distributed data and medians (interquartile ranges) for non-normally distributed data.

2. The Restructuring Process and Piloting of the New TEP

Results from the previous studies compelled the KTP to revise its TEP, and a restructuring process led to the development of the Focused Assessment for Transplantation of the Kidney (FASTRAK) clinic – a system aimed at reducing the number of visits to the hospital and expediting the TEP. It was launched in September 2014 as an initiative to deliver innovative patient-centered care and consists of 4 stages: referral, phase 1, phase 2, and final disposition. A referral is initiated when a referral package is received from a referral centre. Phase 1 of the evaluation generally begins with the patient's first visit to the pre-transplant assessment clinic and includes tests and consultations with a transplant nephrologist, pre-transplant nurse coordinator, and social worker. Phase 2 of evaluation is often initiated if further testing or consultations are required to determine eligibility for transplant. FD is defined as the time point at which the patient's transplant eligibility is finalized.

Pilot Assessment of the FASTRAK System

A single-centre retrospective cohort study was conducted of adult patients referred for kidney transplant assessment to UHN between September 1, 2016 and December 31, 2017, and followed-up until June 30, 2018. Patients were excluded if they were only referred for post-transplant follow-up care or simultaneous kidney-pancreas transplant assessment. Demographic data and information related to their pre-transplant evaluation were collected from hospital health records and entered into CoReTRIS after data audits (Famure et al., 2014). The primary outcome was time to completion of three critical time periods, as described above. Normally distributed and skewed distributed data on time spent in each period were reported using means (±standard deviations) and medians (interquartile ranges), respectively.

RESULTS

Initial Assessment of the TEP

A total of 2,619 adult patients were referred to UHN for kidney transplant assessment during the study period. After applying the exclusion criteria, the final study cohort consisted of 2,555 patients (Figure 1). Participants were largely Caucasian (56%) males (61%), who were 50 (±14) years of age at referral (Table 1). Eighty-four percent of patients obtained a FD by the end of the study period

Figure 1

Initial Assessment Study Flow Diagram

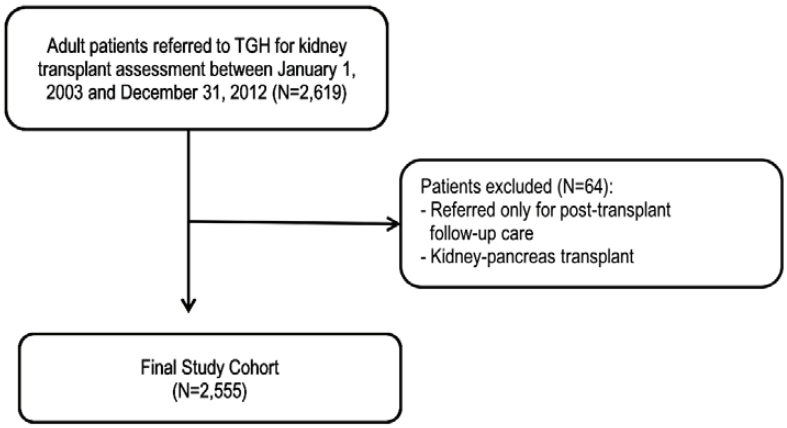


Table 1

Baseline Characteristics of Patients from the January 1, 2003 to December 31, 2012, Patients' Perspectives, and Pilot Cohorts

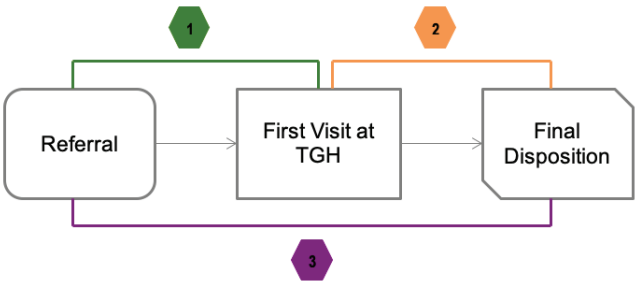
Variables	2003 to 2012 Cohort (N = 2555)	Patients' Perspectives Cohort (N = 184)	Pilot Cohort (N = 245)
Mean age at referral in years (SD)	50.3 (±13.7)	50.1 (±15.2)	53.3 (±14.4)
Male sex (%)	61.4	63.0	60.8
Race (%)			
Caucasian/White	55.8	53.0	12.7
Asian	12.9	18.0	4.5
Black	12.5	6.0	1.6
Other/Unknown	18.9	23.0	81.2*

SD: Standard deviation, N: Number of patients
*Eighty-one percent of race data for the pilot cohort was not available at the time of study.

(Table 2). The median times for each time period were 114 days from referral to FV, 207 days from FV to FD, and 363 days from referral to FD (Table 2). A small number of patients (N = 132) were deemed unsuitable for transplant during the referral period and therefore did not proceed to the first visit (Table 2).

Figure 2

Three Critical Time Periods of the TEP



Healthcare Providers' Perspectives on the TEP

In summary, the interviews revealed a backlog of patients in evaluation, suboptimal patient tracking and documentation, and labour-intensive practices as contributors to program inefficiencies and limited growth. The needs identified by healthcare providers were related to program resources, the patient assessment process, documentation, and data management (Table 3). Examples of needs include having a unified vision and programmatic goals, reconfiguring resource allocation, streamlining the workflow, communicating effectively, improving documentation and data management, and utilizing information technology systems effectively (Table 3). Recommendations to improve the program targeted seven areas: vision, assessment office organization, workflow, team functioning, data collection, education, and new initiatives.

Patients' Perspectives on the TEP

Two hundred and thirty-six patients were approached in the post-transplant kidney clinic and a total of 184 surveys were completed (Supplementary Figure 1a). The mean

Table 2

Comparison of Median Times of the Three Critical Time Periods for a patient to Complete the TEP (Cohort from January 1, 2003 to December 31, 2012)

Time Period	Number of Referrals	Number of Events	Median Time in Days (IQR)
Referral to First Visit	2555	2010*	114 (74, 190)
First Visit to Final Disposition	2010	1918	207 (85, 449)
Referral to Final Disposition	2555	2142	363 (201, 646)

*Final disposition is defined as the time point when a patient's transplant eligibility is determined. Some patients were deemed unsuitable for transplant during the referral phase and did not proceed to the first visit.
Number of referrals refers to the number of patients that were deemed eligible to reach the second part of a time period. Number of events refers to the number of patients that were deemed eligible to reach the second part of a time period and actually reached that second part.
IQR: Interquartile range, TEP: Transplant evaluation process

Table 3

Summary of Needs Assessment of the TEP

Domains	Challenges	Recommendations
Program resources	Ambiguous understanding of role and responsibilities Ineffective communication	New team structure with defined roles Streamlined communication between offices
Patient assessment process	Convoluted process Redundancies Target time for completion of evaluation was not standardized	Revamped referral forms and welcome packages tailored to each TEP stage Creation of a streamlined program to expedite evaluation Establish a program vision and goals
Patient information and documentation	Infrastructure impediments to effective utilization of functional resources	Efficient utilization of the health systems Assignment of patients to specific coordinators
Program data	Difficulty in generating data query and patient data	Decrease manual data entry Collaborate with IT to maximize efficient use of health systems

IT: Information technology, TEP: Transplant evaluation process

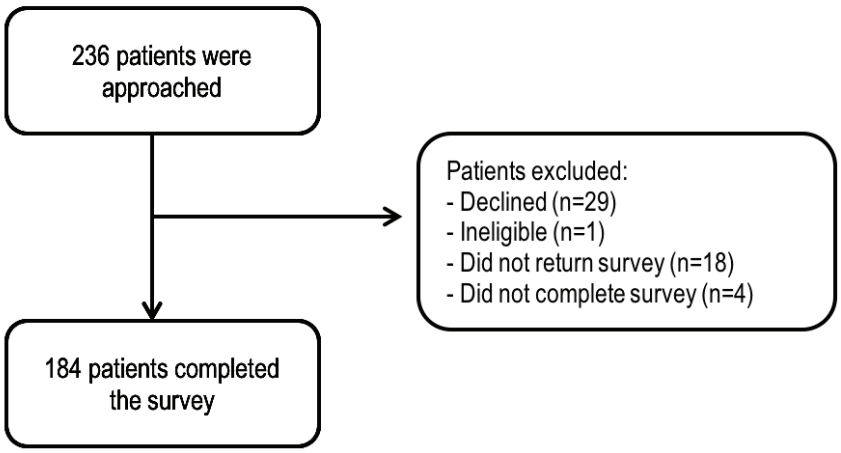
age at referral was 50 (±15) years, 63% of participants were male, and 53% of patients identified as Caucasian (Table 1). A majority of patients expressed that the length of time from referral to FD (66%), referral to FV (62%), and FV to FD (59%) were reasonable (Supplementary Figures 2a-c). Similarly, participants noted that they received sufficient education regarding kidney transplantation (e.g. risks and benefits of transplantation, lifestyle changes, deceased versus living donor kidneys, mental/emotional readiness) from transplant nephrologists/surgeons, social workers, and pre-transplant coordinators (Supplementary Figures 3a-c). Further, patients identified financial support (e.g. drug coverage) and practical support (e.g. transportation plans) as barriers to the timely completion of their evaluation (Supplementary Figure 4a). Participants also conveyed the need for more regular, efficient, and clearer communication with the pre-transplant nurse coordinators (Supplementary Figure 4b).

Development of FASTRAK

The restructuring of the TEP resulted in the creation of the FASTRAK clinic. The goal of FASTRAK is to reduce the number of visits to the hospital during the TEP by condensing the scheduling of appointments at UHN to as few visits as possible (usually 2 to 3), while maintaining the rigour of the assessment process. In addition, the

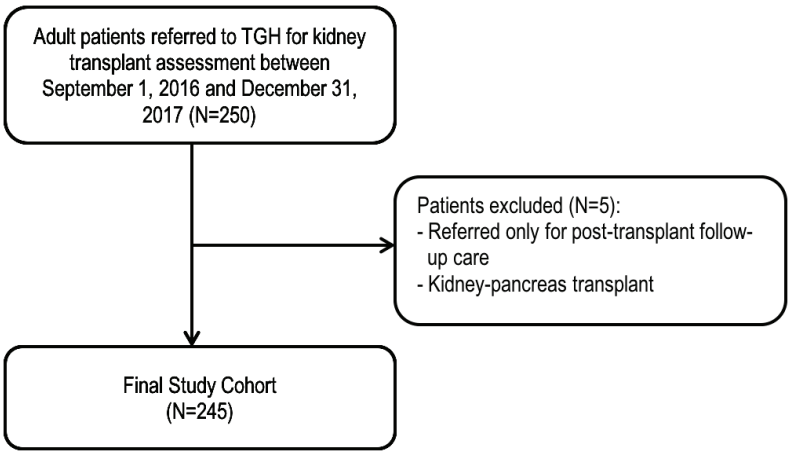
Supplementary Figure 1a

Patients' Perspectives Study Flow Diagram



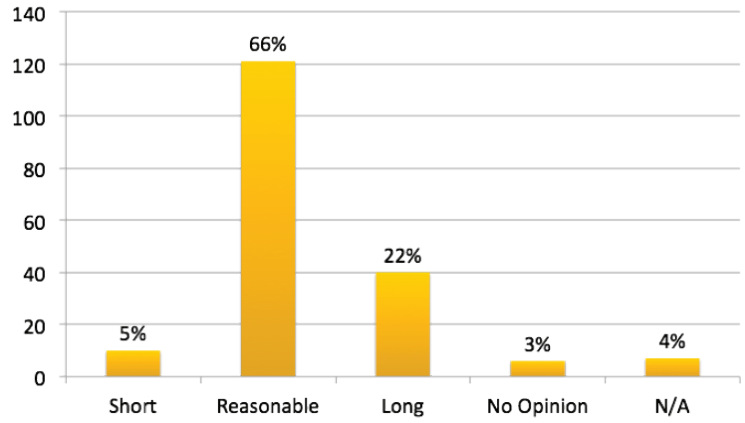
Supplementary Figure 1b

Pilot Study Flow Diagram



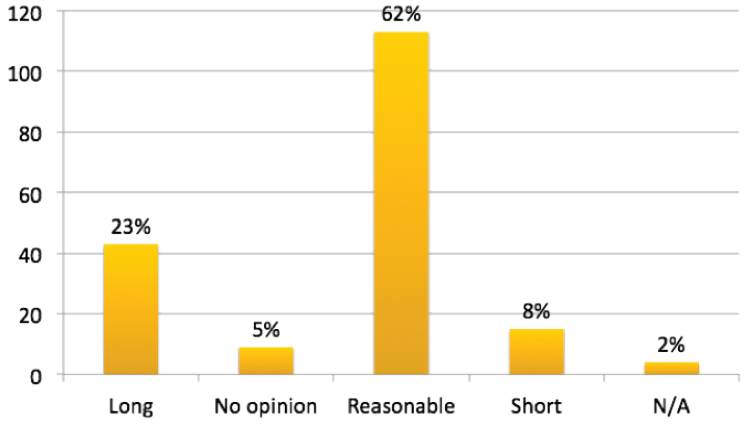
Supplementary Figure 2a

Opinion on Length of Time From Referral to Final Disposition



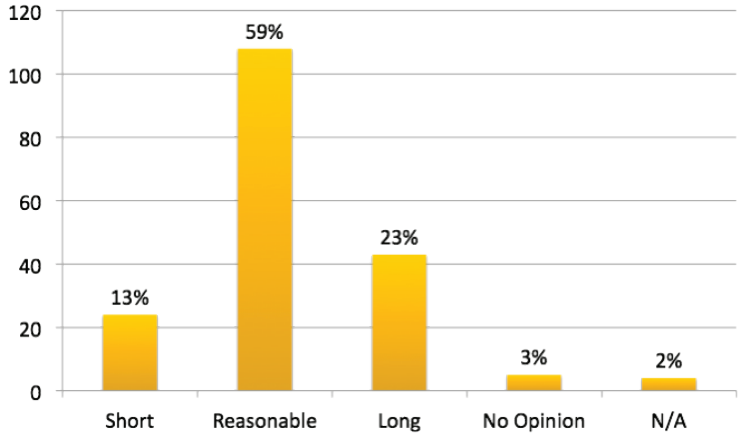
Supplementary Figure 2b

Opinion on Length of Time from Referral to First Visit



Supplementary Figure 2c

Opinion on Length of Time from First Visit to Final Disposition



streamlined process aims to reduce the length of the evaluation from referral to FD to about 90 days. In contrast to the old TEP, which had three distinct phases – referral, evaluation, and FD – the FASTRAK has four stages: (1) referral, (2) phase 1 (first visit with transplant team including nurse coordinators, transplant nephrologists), (3) phase 2 (subsequent visit with other team members e.g. social work), and (4) FD. Each phase has clearly defined goals and objectives (Supplementary Figure 5). Other key changes focused on improving efficiency, standardizing the process, and clarifying roles (Table 4). Specifically, these include the reorganization of cases based on referring centres as opposed to random assignment, outlining expectations with referral centres regarding timeline for submitting referral documents, creation of a designated role in the team to ensure receipt of a complete referral package, implementation of standardized educational materials (e.g. presentation slides) by transplant coordinators and social workers, and integration of information systems into workflows to facilitate patient management.

Pilot Assessment of the FASTRAK System

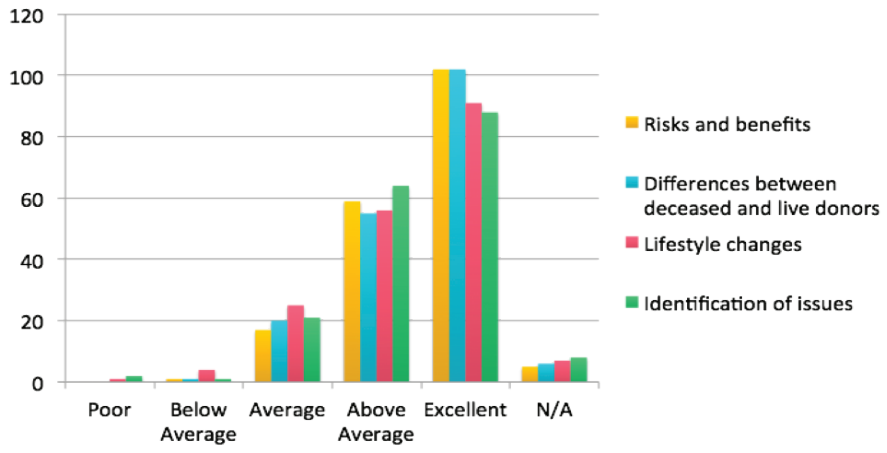
Two hundred and fifty patients were referred for kidney transplant assessment during the pilot study (Supplementary Figure 1b). The final cohort consisted of 245 patients who were 53 (±14) years of age at referral (Table 1). Sixty-one percent were male and 13% identified as Caucasian (Table 1). The median times for each critical time period reduced from 114 to 91 days from referral to FV (P = <0.001), 207 to 155 days from FV to FD (P = <0.001), and 363 to 230 days from referral to FD (P = <0.001) (Table 5). Some patients were deemed unsuitable for transplantation at the time of referral and therefore did not proceed to the first visit.

DISCUSSION

The restructuring process was a massive undertaking for the KTP and spanned several years. This initiative required significant resources, time, and effort. An initial assessment of the kidney TEP revealed a complex and labour-intensive process that involved multiple patient visits to the hospital, repetition of tests, and several consultations with members of the transplant team. The FASTRAK clinic was developed and implemented to streamline and optimize the assessment process. This new system aimed to reduce the number of visits to the hospital and complete evaluation within 90 days, thereby lessening the burden on patients

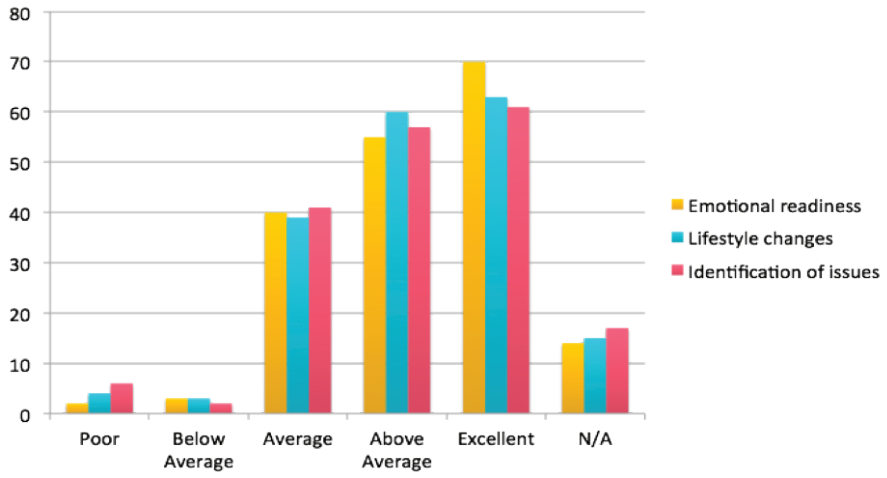
Supplementary Figure 3a

Opinion on Adequacy of Education Received From Transplant Nephrologists/Surgeons



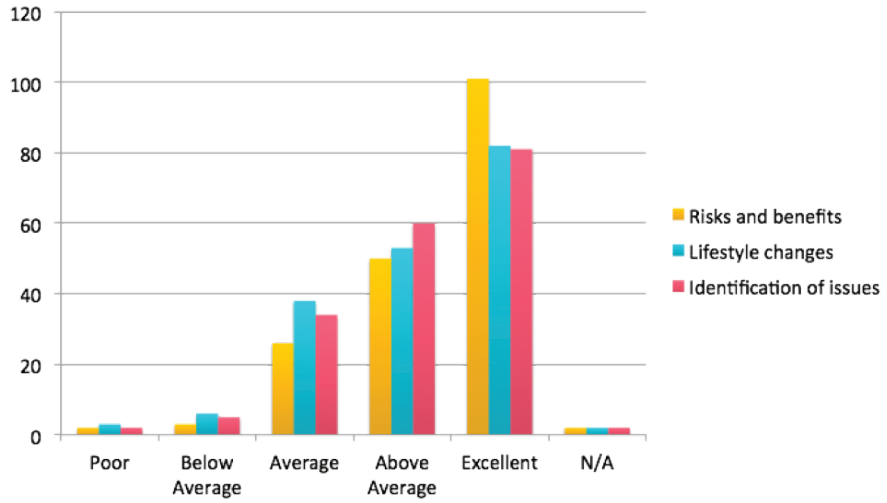
Supplementary Figure 3b

Opinion on Adequacy of Education Received From Social Workers



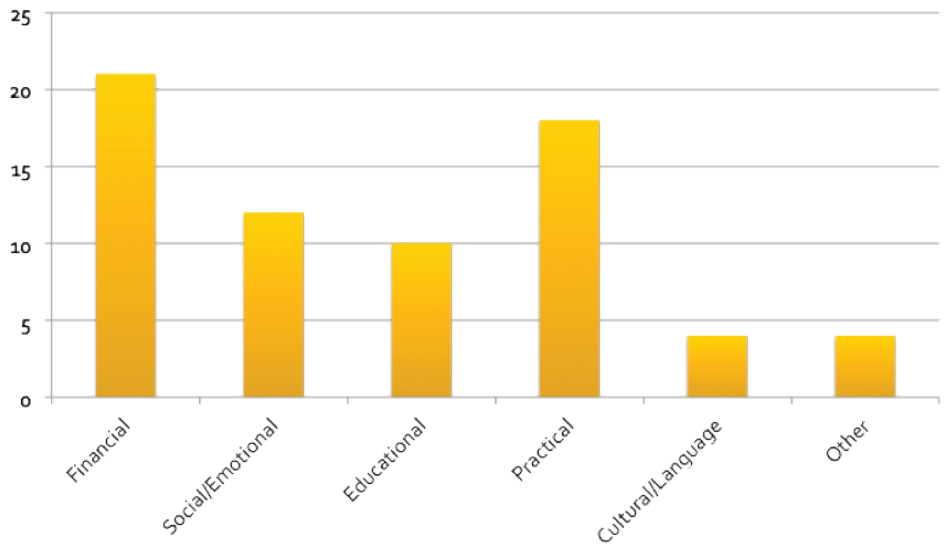
Supplementary Figure 3c

Opinion on Adequacy of Education Received From Pre-transplant Coordinators



Supplementary Figure 4a

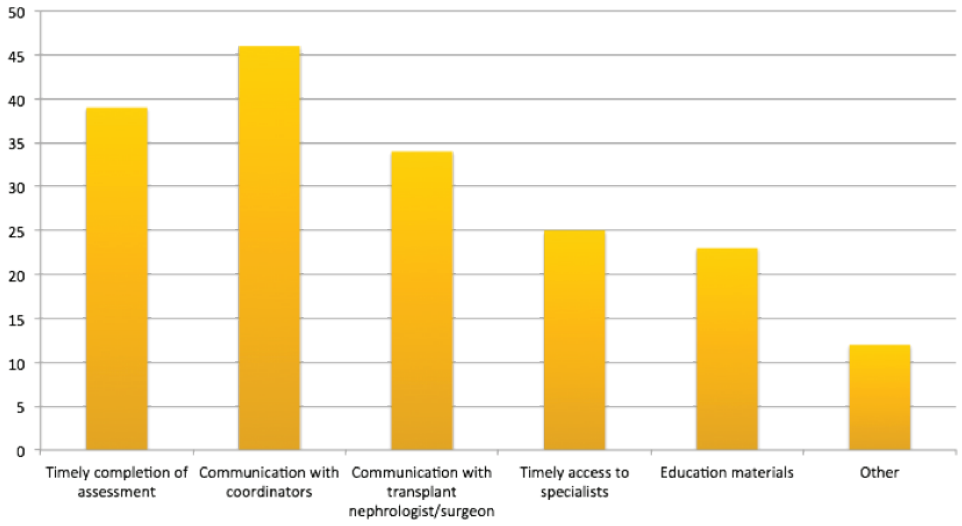
Barriers Experienced by Patients During the Pre-transplant Evaluation Process



**Categories are not mutually exclusive.*

Supplementary Figure 4b

Patients' Perspectives on Types of Services Within the Pre-transplant Evaluation Process That Need Improvement



Supplementary Figure 5

Focused Assessment for Transplantation of the Kidney (FASTRAK) System

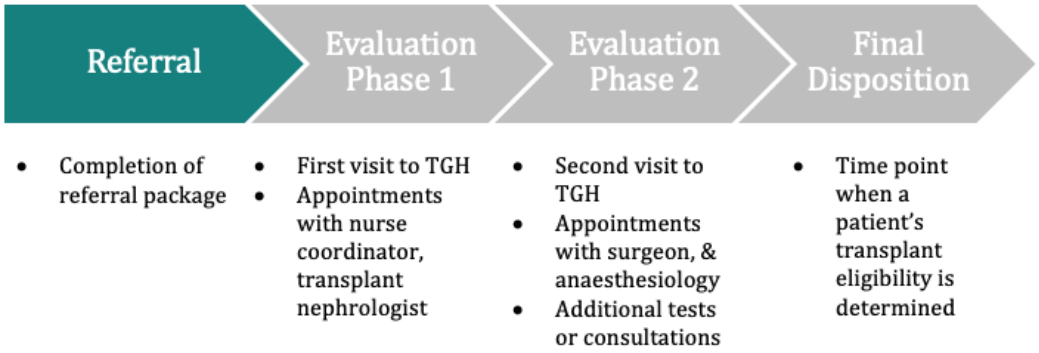


Table 4

Comparison of TEP Characteristics Pre- and Post-Restructuring

Domains	Old TEP System	New TEP System
Program resources	Ambiguous understanding of roles One nurse is responsible for tracking the patient throughout the entire TEP process Patients may fall through the cracks when workload is high	Roles are clearly defined One nurse is responsible for tracking each patient through a specific phase (referral, phase 1, or phase 2) of the TEP Allows for better patient tracking
Patient assessment process	Convoluted process Frequent visits to hospital, sometimes due to redundancies Some patients started evaluation despite incomplete referral package	TEP is more streamlined Number of visits to the hospital was reduced to 2 The referral package must be complete prior to proceeding to phase 1
Patient information and documentation	Each coordinator had their own patient tracking sheet, which limited the ability of other coordinators to take over patient load when the nurse was on vacation Referrals received were randomly assigned to nurse coordinators, limiting relationship building between centres	Use of OTTR for centralized tracking of patients One nurse is responsible for referrals received from their assigned centres, which facilitates relationship building between centres
Program data	Documentation of some data points were not consistent with clinical flow	Documentation into hospital health records is congruent with clinical flow Allows for transparency regarding program performance

TEP: Transplant evaluation process; OTTR: Organ Transplant Tracking Record

Table 5

Comparison of Median Times of the Three Critical Time Periods for a Patient to Complete the Restructured TEP Through the FASTRAK System (Cohort from September 1, 2016 to December 31, 2017)

Time Period	Number of Referrals	Number of Events	Median Time in Days (IQR)
Referral to First Visit	245	225*	91 (58, 113)
First Visit to Final Disposition	225	225	155 (79, 247)
Referral to Final Disposition	245	245	230 (148, 351)

*Final disposition is defined as the time point when a patient's transplant eligibility is determined. Some patients were deemed unsuitable for transplant during the referral phase and did not proceed to the first visit.
IQR: Interquartile range, TEP: Transplant evaluation process; FASTRAK: Focused assessment for transplantation of the kidney

and healthcare staff. When comparing the median times measured pre- and post-restructuring, we found a decrease from 114 to 91 days from referral to FV (P = <0.001), 207 to 155 days from FV to FD (P = <0.001), and 363 to 230 days from referral to FD (P = <0.001).

The pre-restructuring median time for completing the evaluation process from referral to FD was calculated to be 363 days. Despite this seemingly lengthy time, the majority of participants who were surveyed regarding their transplant evaluation experience indicated that the length of time from referral to FD was reasonable. Patients may consider this timeline acceptable because they do not have a benchmark of what constitutes timely completion of evaluation (Sultan et al., 2013). In addition, prior to restructuring, the KTP did not have a clearly defined goal for completing evaluations. In the literature, there is no clear estimate of an optimal time for completing kidney evaluation due to the scarcity of studies focusing on performance measures of the TEP (Brett et al., 2018). This programmatic review sets a benchmark for future improvement efforts within our program.

Healthcare providers who were interviewed raised issues pertaining to the allocation of program resources, the patient assessment process, documentation, and data management. The patient assessment process was thought to be convoluted and involve too many steps. In many cases, it was prolonged due to repetition of tests and consultations, and labour-intensive practices, placing significant burden on patients and healthcare staff. Documentation was also an issue due to a lack of centralization (e.g. paper and electronic charts), and contributed to poor patient tracking, unnecessary delays, and arduous data management. According to the NHS (2013), inefficient utilization of functional (e.g. health systems) and human resources creates barriers to completing evaluations. With these concerns in mind, and its commitment to delivering better care to patients, the KTP proceeded to restructure its TEP.

Moreover, many participants stated that they received sufficient education regarding kidney transplant. Timely and targeted health education ensures that patients are well informed and equipped to navigate the complex evaluation process (Musci et al., 2018). Educational strategies that address the entire transplantation process help improve knowledge and readiness for the challenges associated with transplant (Rosaasen et al., 2017). Further, patients who were surveyed identified deficits in financial and practical supports (e.g. drug coverage, transportation plans) as obstacles to timely completion of their transplant evaluation. Dissemination of educational materials addressing these topics at an early stage of evaluation may be beneficial in allowing patients to plan ahead and overcome these barriers (Dageforde et al., 2015). Patients also expressed a need for better communication with pre-transplant nurse coordinators. Effective communication should be emphasized in the restructured system to ensure patients' concerns and questions are addressed in both an appropriate and timely manner. In addition to delegating one nurse coordinator to manage patient referrals from assigned referring centres, it is also important for transplant centres to collaborate with referring centres to ensure that there are designated staff to manage transplant cases and play an essential role in providing transplant evaluation status updates. Such improvements in patient engagement and communication will likely help facilitate patient navigation through the TEP.

The KTP streamlined the TEP into 4 distinct phases and set a benchmark of 90 days for completing evaluations. Creating distinct phases and setting clear objectives for each phase allows healthcare providers to better monitor patient progression and improve patient management. Standardization of the TEP allows for enhanced data capture at the point of care and improved documentation. In addition, establishing a protocol to standardize documentation (e.g. timing, procedures, roles, etc.) makes data management more effective. Further, clustering appointments reduces the burden on patients because they do not have to travel to the hospital as often and take additional time off work. Having a program performance benchmark allows patients to have a general idea of the evaluation timeline. Similarly, healthcare providers have a goal to work towards. The development of FASTRAK was an important initiative for the KTP as transplant centres search for strategies to accommodate the growing number of referrals while providing high quality care with limited resources.

This evaluation was not without its limitations. Firstly, the quality of the retrospective patient data may be affected by the variation in documentation between healthcare providers prior to restructuring the TEP. However, a systematic approach to data selection and analysis was used to ensure validity and mitigate differences in documentation. Secondly, the patients' satisfaction survey was distributed around the time the FASTRAK clinic was being launched. However, the likelihood that patients in the midst of their evaluation in FASTRAK were included was minimized based on the exclusion criteria. Upon further examination of the data, only seven patients were evaluated via FASTRAK. Thirdly, despite being more efficient, logistical issues were not always accounted for by the FASTRAK process. During phase 1, transplant nephrologists are only able to assess a certain number of patients during their clinic hours; as a result, scheduled appointments may not always follow the established protocol. However, these cases are exceptions rather than the norm. Lastly, although the FASTRAK clinic has reduced the time from referral to FD from 363 to 230 days, it has not yet achieved its ultimate goal of 90 days. Further investigations are needed to identify strategies to attain this goal.

This was the first time the UHN KTP comprehensively summarized the efforts dedicated to restructuring the pre-transplant process. Our analysis, which showed a favourable impact on pre-transplant performance, will guide future investigations to address barriers that can hinder the efficiency of the FASTRAK clinic and develop strategies to improve patient experiences. Consistent with the provincially-mandated initiatives to increase access to kidney care and transplantation, the FASTRAK clinic is aimed at enabling the UHN KTP to process a high volume of referrals in a timely manner, while maintaining high standards of patient care.

CONFLICT OF INTEREST STATEMENT

The authors certify that they have no affiliations with or involvement in any organization or entity with any financial interest or non-financial interest in the subject matter or materials discussed in this manuscript.

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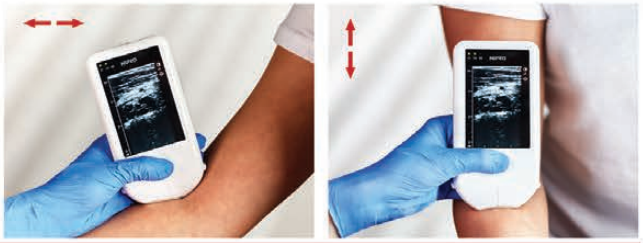

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ORAL PRESENTATIONS

1. Patient Experience: How Expanded Dialysis Therapy Impacts Health-Related Quality of Life Using a Dynamic Patient Reported Outcome Measurement Tool

Jarrin D. Penny, BSN, RN, CNeph(C), PhD Candidate – Research Associate[1,2]
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Christopher W. McIntyre, MD, PhD[1,2,3]

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Purpose: Current hemodialysis (HD) treatments have limited ability to clear larger molecular weight uremic toxins. Retention is associated with increased symptom burden, low health-related quality of life (HR-QOL) and high mortality. Improved clearance, using novel medium cut-off dialyzers, known as expanded dialysis (HDx) may be associated with improved HR-QOL. The London Evaluation of Illness (LEVIL), a dynamic patient reported outcome measure instrument allows iterative recordings to understand overall burden of disease and assess the impact of therapy.

Methods: Initial study consisting of two-week observation (baseline with high flux membrane), followed by 12-weeks HDx therapy (Theranova-Baxter). HR-QOL was assessed using dynamic PROM LEVIL instrument thrice weekly. Extension phase – two-week baseline with 24-weeks HDx and eight-week wash-out. Principal aim was to establish if HDx therapy was associated with changes in HR-QOL utilizing LEVIL.

Results: Patients with lower LEVIL scores (<70/100) at baseline showed improvement in overall HR-QOL after eight-weeks of therapy. General wellbeing, energy and sleep quality were improved significantly as a consequence of HDx therapy. There were no detrimental effects in patients with higher baseline HR-QOL.

Conclusion: Dynamic PROM assessment effectively identified patients with lower HR-QOL and higher symptom burden, demonstrating durable time/dose-dependent improvements across a range of symptom domains.

Implications for nephrology care: Improving HR-QOL in the HD population is an essential priority from a patient experience perspective and as a surrogate for longer term outcomes. Additionally, the ability to systematically identify patients that may benefit from therapy in a constrained healthcare system is paramount.

2. Having *That* Conversation: A Grounded Theory Exploring the Role of Nurses in Supportive Care in Hemodialysis in Ontario

Jovina Concepcion Bachynski, MN-NP(Adult), RN(EC), C(Neph)C, PhD Student – Halton Healthcare, Oakville, ON; Queen's University, Kingston, ON

Background: Kidney failure is among 20 health conditions that most commonly result in death or suffering that is severe enough to require palliative care (PC).[1] The term *supportive care* has replaced *palliative care* to avoid the misunderstanding that PC is synonymous with end-of-life care.[2] Kidney supportive care is an approach that improves the quality of life of people living with kidney disease through the relief of suffering by means of early identification and treatment of symptoms throughout the illness trajectory.[3] It encompasses advance care planning (ACP), which involves ongoing communication between the healthcare team and patients about the latter's values, goals, and preferences for future care. It is under-utilized and often initiated late in the illness trajectory.[4] Dialysis nurses are not providing the necessary elements of kidney supportive care. The delay or lack of engagement in supportive care until close to the end of life can result in patients dying in acute care settings without receiving PC services.[5]

Purpose: The purpose of this study is to develop a substantive theory that explains the process of engagement in supportive care by nurses in hemodialysis in Ontario.

Method: Utilizing Charmaz's constructivist grounded theory method, 25 hemodialysis nurses from across Ontario will be recruited and interviewed.

Implications: Nurses in hemodialysis are well-positioned to ensure the delivery of a quality supportive care. This study will help to determine the factors impeding nurse engagement in supportive care in hemodialysis in order to effect change that would normalize ACP conversations in the clinical setting.

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3. L'hyperkaliémie en hémodialyse

Danielle Boucher, IPSN, M.SC., D.E.S.S, CNeph(C), Infirmière praticienne soins adulte volet néphrologie – CHU de Québec-Université Laval

Le potassium est un électrolyte intervenant dans la contraction musculaire plus particulièrement celle du muscle cardiaque. Ainsi, une concentration sérique de potassium trop élevé lors hyperkaliémie est à l'origine de faiblesses musculaires et de troubles du rythme cardiaque pouvant provoquer un arrêt cardiaque.

Les patients en insuffisance rénale sont particulièrement exposés à un risque d'hyperkaliémie puisque le rein joue un rôle majeur dans la régulation du potassium. En effet, l'hyperkaliémie résulte généralement d'une diminution de l'excrétion de potassium rénal ou d'un déplacement anormal de potassium hors des cellules. En général, plusieurs facteurs favorisants simultanés concourent à l'hyperkaliémie.

La mortalité, notamment cardiovasculaire, du patient hémodialysé est nettement plus élevée que celle observée dans la population générale. La mort subite en est une des causes principales. Le rôle des variations de la kaliémie induites pendant la dialyse et l'accumulation du potassium dans la période inter-dialytique font partis des explications à cette surmortalité.

Pour les patients en hémodialyse les traitements de l'hyperkaliémie sont ordres nutritionnel et pharmacologique. À travers le temps ces derniers ont évolué. De nouvelles stratégies ont faits leurs apparitions. Nous brosserons un tableau de ces dernières et présenterons les nouvelles molécules chélateur de potassium, soit le Lokelma (Cyclosilicate de ziconium sodique) et Veltassa (Patiromer).

Objectifs

À l'aide d'un cas clinique

- Regarder les risques associés de l'hyperkaliémie chez les patients hémodialysés
- Connaître les recommandations actuelles
- Faire une réflexion sur les options thérapeutiques dont les nouvelles molécules chélateur de potassium, soit le Lokelma et Veltassa.

4. Pharmacomechanical Declotting of Thrombosed Arteriovenous Accesses in Interventional Radiology

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Dr. Allan Yee, MD, FRCPC – Vascular/Interventional Radiologist[1]
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Purpose of the Project: Preservation of arteriovenous (AV) access is key to avoiding central venous catheter (CVC) placement. CVCs have been associated with complications such as infection, thrombosis, and central vein stenosis, which can limit future vascular access options. We describe percutaneous thrombolysis with overnight systemic thrombolysis to treat clotted AV accesses (fistulae and grafts).

Description: An environmental scan in Canada identified that the majority of nephrology programs perform a combination of percutaneous and surgical procedures, without overnight thrombolysis. Our percutaneous treatment of thrombosed AV accesses includes: (1) duplex ultrasound to identify extent of thrombus; (2) request inpatient bed; (3) fistulogram and angioplasty with pharmacological and mechanical thrombolysis; (4) overnight systemic thrombolysis (suitability determined by the interventional radiologist); and (5) fistulogram with/without angioplasty the following day to determine patency.

Evaluation/Outcomes: Thrombolysis data from January 2015 to May 2021 (77 months) identified 128 cases (average 1.6 per month). Seven cases did not undergo a procedure (unsuitable/patient refusal) and were excluded from the data. Of the 121 cases remaining, 75 (65%) were successful; 29 (24%) underwent overnight systemic thrombolysis (22 [76%] successful and 7 [24%] unsuccessful); and 17 (14%) were deemed not salvageable by the interventional radiologist (multiple procedures, age of access, aneurysms, and failed surgeries). Adverse events were observed in two cases (1.7%): urticaria and angioedema (1), and oxygen desaturation (1). Inpatient beds unavailable 20% of the time; however, this did not lead to AV access loss.

Implications for Nephrology Practice/Education: Our unique approach with overnight systemic thrombolysis for the treatment of thrombosed AV accesses may be considered by other programs as a strategy to improve AV access patency.

5. The Use of Innovation to Address an Increase in Central Venous Catheter Infection Rates in a Hemodialysis Unit

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Fiona A. Harrington, MN, RN – Clinical Leader Manager[1]
Kathleen McIntosh, RN – Vascular Access Nurse[1]
Sadie Webster, RN – Vascular Access Nurse[1]

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Purpose of the Project: Infections are common complications among patients on chronic hemodialysis. Patients with a hemodialysis central venous catheter (CVC) are two to three times more at risk of increased hospitalizations for infection and death compared to patients with an arteriovenous fistula or graft[1,2]

In the spring of 2020, the vascular access team noticed an unexplained increase in dialysis central catheter-related bloodstream infections (CRBSIs) from 0.20 to 0.81 per 1,000 catheter days. Many of these infections were noted several days post interventional radiology insertion.

Description: The aim of this project was to identify the cause of our increased rates and develop solutions to address this problem. Using a 'Plan, Do, Study, Act' methodology, each step of the process was reviewed. This included: hand hygiene, vascular access insertion, care and maintenance audits, cleansing agents, dressings, CVC cuff exposure practices, engagement of stakeholders, and current best practices.

Evaluation/Outcome: A multifaceted approach to this problem was implemented, which included a review of basic catheter care, standardized education including changes to our protocol and procedures, and innovation in this vulnerable patient population. The overall outcome was a reduction in line infection rates to 0.18 cases per 1,000 catheter days.

Implication for Nephrology Practice/Education: It was evident through this quality improvement initiative that surveillance programs require dedicated teams and resources to closely monitor CRBSI rates. Such improvement opportunities include standardization or process, and engaging staff and patients in the prevention and management of CRBSIs.

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6. Investigating the Efficacy of Live Module Training in Crisis Management Education

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Numerous crisis intervention programs have been developed to train healthcare providers to appropriately respond to patients presenting with assaultive behaviours. Nevertheless, one has not yet been adapted to be both population- and setting-specific. To address this knowledge gap, we explored the efficacy of training staff using live modules of crisis scenario re-enactments in improving their ability and confidence to manage patients presenting in crisis at an in-centre hemodialysis unit. These modules were adapted from true patient-provider scenarios and highlighted various patient and staff safety concerns within the unit. The training is informed by the crisis development theory, verbal de-escalation, and simulation-based learning.

In total, 104 multidisciplinary hemodialysis staff participated in a standardized 30-minute training module facilitated by renal social workers. After viewing the prefilmed re-enacted scenarios, facilitators analyzed patient-staff interactions, provided various de-escalation strategies and resources, and facilitated interactive discussions of the material.

Pre and post questionnaires were administered to measure knowledge, attitude, and comfort level of utilizing de-escalation techniques. We developed a logical model to facilitate the training and communication among the staff. A manual was developed to ensure all sessions were delivered consistently. All staff members were well informed about training sessions, 76% of staff members attended, and staff reported high satisfaction with the program. Most crisis management indicators showed statistically significant improvements between pre-training and post-training, indicating the efficacy of these modules in training healthcare professionals to appropriately de-escalate patient crises and avert negative outcomes. A follow-up survey will be conducted in September 2021.

7. Nephrology Nurse Practitioner Competencies

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Purpose: The purpose of this educational initiative is to highlight the importance and delivery of standardized nephrology nurse practitioner (NP) care by developing a set of core nephrology NP competencies for advanced education, guidance with curriculum development, research, and mentorship in various nephrology clinical settings.

Description: Chronic kidney disease (CKD) is a life altering and multifaceted illness impacting millions of Canadians that eventually progresses to end-stage renal disease (ESRD), which is associated with high mortality, despite the best available care[1]. NPs play an indispensable role in the specialized care of nephrology patients. NPs can independently assess, conceptualize, and diagnose multifaceted health problems; manage acute and chronic renal complications; prescribe, and evaluate pharmacologic and therapeutic treatment regimens; and are competent in recognizing and explicating complex renal problems in various healthcare settings. However, the literature suggests that educational, knowledge, and care coordination gaps exist among NPs in nephrology.[1,2] Currently, in Canada, there are no nephrology-specific NP competencies that NPs can use to enhance their knowledge development and promote ongoing learning to support patient care. Therefore, the development of the *Nephrology Nurse Practitioner Competencies* is intended to highlight the specialized care nephrology NPs provide. These competencies were developed by an expert panel of nephrology NPs across Canada to serve as a resource in supporting NP education, knowledge application, and care coordination in all nephrology settings to enhance patient care. Additionally, these competencies will create a foundation for nephrology NP education curriculum.

Outcomes: The competencies will promote a framework for practice performance and enhancement. Additionally, these competencies will also improve the knowledge, skills, and judgement of NPs in nephrology in providing safe competent care. The competencies will also provide guidance to health organizations on specialized knowledge, training, and skills needed for NPs to practice in the nephrology domain.

Implications for Nephrology Practice: The Nephrology Nurse Practitioner Competencies will inform academic institutions, course providers, health care leaders, and mentors about the required advanced nephrology-specific clinical education needed to enable NPs to provide safe competent care for patients in nephrology practice settings. Furthermore, this will assist in assessing NP competency to practice in nephrology.

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8. Peritoneal Dialysis – Why Adopting a Home First Model to Renal Replacement Therapy is Important

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Peritoneal dialysis (PD) provides renal replacement therapy by diffusion of solutes, and ultrafiltration of solute and fluid across the peritoneal membrane. Although many physicians, nurses, and patients are familiar and comfortable with hemodialysis (HD), PD is a less well-understood but attractive alternative. It provides a survival equivalence to hemodialysis[1] and has been shown to better maintain residual renal function (RRF),[2] and maintaining RRF conveys a survival advantage.[3] Although surgical access is required to perform HD and PD, the arteriovenous fistula, when compared to the PD catheter, has a higher primary failure and intervention rate.[4] The traditional risks involved with HD, including catheter-related infection, and higher mortality from HD intermittency, are avoided in PD. There is also no difference between HD and PD in outcomes when transitioning to transplant.[5]

One of the most important advantages of PD is lifestyle. PD can be performed at home, increasing independence and quality of life. Additionally, in the last decade, there has been a shift toward incremental PD.[6] When RRF is maintained, a small amount of PD can provide symptomatic improvement and decrease the rate of GFR decline,[3,7] while being less burdensome. This is especially important in certain populations

such as heart and liver failure, and patients with cognitive decline. This talk will describe the advantages of PD, and the basics of providing PD and troubleshooting problems. It will outline a model of incremental PD that can be provided to patients to optimize quantity and quality of life.

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9. Achieving Person-Centered Home Dialysis Care in Canada: An Overview

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Purpose: As the prevalence of chronic kidney disease rises, many Canadians will progress to kidney failure and will start dialysis. Home dialysis is promoted in Canada, as it is cost-effective compared to in-centre dialysis therapies. Home dialysis can be challenging, as individuals must learn to perform a complex procedure while also managing other factors related to their kidney failure and its associated comorbidities. A person-centred approach to care is required to adequately support someone on home dialysis, as challenges will vary based on the unique characteristics and experiences of the individual. Unfortunately, little is known about how to effectively deliver person-centered home dialysis care.

Description: We performed a narrative review of the literature pertaining to person-centred care (PCC) and identified key components of delivering it in the context of home dialysis.

Evaluation: The dimensions of PCC varied between the theories and frameworks presented, but a multi-faceted approach was universally regarded as a foundational element. The integration of individual perspectives, values, and the needs of all stakeholders was integral to success but was often difficult to achieve due to a multitude of barriers. PCC in the context of home dialysis was not well-studied.

Implications: The implementation of person-centered home dialysis care may address many challenges faced by individuals on home dialysis and may be an important model of care for kidney programs. We plan to implement a collaborative research approach to understand and develop person-centred home dialysis care in Canada.

10. Promoting Self-Management: Addressing the Educational Needs of New Hemodialysis Patients

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Pre-dialysis education plays a key role in helping patients adjust to their kidney disease. Education programs are designed by clinicians with the goal to address patient needs. However, little evidence shows patient involvement in the development of effective educational programs for new hemodialysis (HD) patients. The objectives of this study, located at St. Paul's Hospital (SPH) Incentre Hemodialysis unit, were: (i) to investigate the educational needs of patients from their point of view, and (ii) to obtain patient and clinician perspectives on facilitators and inhibitors of implementing a structured education program to promote self-management in new hemodialysis patients. Patients and nurse clinicians participated in interviews and focus groups. The data analysis was done using the interpretive description approach. Several learning needs were expressed by the patients interviewed—information about kidney disease,

how the HD machine works, possible complications that can occur during and post treatment, explanations on medications given and procedures, in addition to results of blood tests taken during their treatments. Clinicians felt that competing nurse responsibilities and short staffing prevented them from providing effective patient education. They recognize that education should be tailored to patient learning needs. In conclusion, these findings strongly indicate that the current state of patient education for new HD patients at SPH is inadequate. Identified themes will assist the healthcare team to better support hemodialysis patients with their learning needs and promote self-management. These insights lay the groundwork for the development of a structured and tailored education program for new patients.

11. Cost Analysis of LTC Outreach HD Program (LTC-HD)

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Purpose: Considering the growing population of seniors with multiple comorbidities in long-term care (LTC), we expect an increase in the population of dialysis patients. The provision of dialysis in LTC is an effective and economical model.[1,2,3,4]

Methods: The cost of dialysis in LTC was calculated using Microsimulation cost analysis. The study was performed on a cohort of dialysis patients residing in LTC (November 2020 to April 2021). Two types of dialysis machines and modalities were selected as per feasibility. Twelve patients on short daily dialysis (SDD) (833 patient-days) using NxStage and 14 patients on conventional dialysis (1061 patient-day).

Results: Supplies and caregiver cost were calculated in LTC based on patient-day on dialysis.

Supplies per day on conventional dialysis and SDD cost $49 and $168, respectively. The caregiver costs per treatment for conventional and SDD are $158 and $178, respectively. Overall, $315,629 were spent on caregivers in LTC.

Transportation costs were evaluated for the same period and population. Considering these patients received in-centre hemodialysis (HD), the healthcare system would incur $481,790 for transportation. The LTC-HD model led to cost savings on transportation that cover caregivers' costs.

The percentage of death and COVID contraction in LTC patients during the pandemic illustrates the efficacy of this model. The percentages of death and COVID positive cases were 43% and 26% in ICHD, and 31% and zero percent in LTC-HD, respectively.

Conclusions: Considering the potential savings on transportation in LTC-HD, caregiver cost is deemed justifiable. It is recommended that the funding be allocated to nephrology programs to facilitate dialysis in LTCs. Through this funding model, the transportation cost could be saved.

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POSTER PRESENTATIONS

12. COVID-19 and New Direction for Dialysis Patients at LTC

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Background: During the pandemic, there were concerns about COVID-19 at long-term care (LTC) facilities. Instead of transferring LTC patients to the hospital, we used a portable dialysis system (NxStage and AK98) at LTC homes to perform dialysis. Transporting patients to hospitals and returning them to LTC facilities may expose the patients to infectious persons during their trips.

Study Design: This feasibility study was designed to evaluate the sustainability of dialysis services in LTC facilities.

Setting and Participants: LTC facilities located within the Central Local Health Integrated Network (LHIN) were engaged to participate in this pilot project. Chronic dialysis patients receiving outpatient hemodialysis consented and enrolled in the LTC dialysis program.

Results: Between May 2020 and May 2021, a total of 30 chronic hemodialysis patients were enrolled into the pilot study. The LTC service model proved to be superior in terms of the quality of care dialysis patients were able to receive at their residence. Implementation of this model allowed us to demonstrate fiscal viability based on the ratio between costs and revenue, and create an additional acute in-center capacity for 30 new dialysis patients.

Limitations: With the exception of clinical markers, there have been no additional key performance indicators built into the study design to evaluate the quality of the model in relation to the dialysis standard of care.

Conclusions: The LTC dialysis services help increase efficiency in the delivery of care, and enhance convenience, safety, and quality of life for patients at LTC. Patients no longer need to rely on outside transportation to their dialysis treatment. This plan is very convenient for LTC patients and reduces the risk of infection and exposure to COVID-19.

13. Quality Improvement by Introducing Long-Term Care Outreach HD Program During COVID Pandemic

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Marjan Kasirlou, BScN, RN, MBA – Home Dialysis Coordinator[1]
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Background: Dialysis patients with several comorbidities tend to be hospitalized frequently.[1,2] During the pandemic, long-term care (LTC) residents experienced social isolation, especially dialysis patients with multiple hospital admissions. The LTC outreach hemodialysis (HD) initiative (LTC-HD) improved the quality of life for this cohort.

Methods: Patients' social engagement and aggressive behaviour were reviewed in order for us to understand the impact of the LTC-HD initiative. Six patients out of 27 were selected by convenient sampling technique. We utilized the Resident Assessment Instrument-Minimum Data Set 2.0 (RAI-MDS 2.0© interRAI Corporation, 2017),[3] to assess the cognitive status, mental health, and quality of life (QoL) of these patients upon admission and on a quarterly basis. At least three assessments utilizing the Index of Social Engagement (ISE) and Aggressive Behaviour Scale (ABS) were conducted per patient from May 2020 to May 2021. A higher ISE score denotes a higher level of social engagement, whereas a lower ABS score indicates a lower aggressive behaviour. (RAI-MDS 2.0 © interRAI Corporation, 2017).

Results: Patients' social engagement improved in this cohort based on the ISE. Thirty-three percent and 50% of the patients exhibited one-score and two-score improvement in the ISE, respectively. One patient demonstrated a decline in social engagement related to hospitalization due to a hip fracture. Half of the patients showed aggressive behaviour on the first assessment (high ABS). Seventeen percent of patients exhibited improvement in their aggressive behaviours. One-third of patients become aggressive following pressure ulcer, fracture, and pain.

Conclusions: Considering social isolation in LTC patients during the pandemic, a decline in social engagement was expected. Providing dialysis in LTC facilitates lower environmental change and reduces the burden of transportation to residents. By maintaining caregiver assignment for the same patient, the therapeutic relationship with residents improved. As a result, the primary care model led to improved social engagement and QoL.

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14. Factors Affecting Dialysis and Medication Adherence Among End-Stage Renal Disease Patients in Metro Vigan, Philippines

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Background: End-stage renal disease (ESRD) was the seventh leading cause of death in the Philippines in 2018. ESRD patients are prescribed a multi-pharmacological treatment and this contributes to a high pill burden intake. This study aimed to determine the factors affecting the adherence of ESRD patients to hemodialysis and medication therapy in four referral dialysis centres in Metro Vigan, which comprises five municipalities.

Methods: The study used a descriptive method of research that utilized a questionnaire-checklist and interviews to gather data from the four selected dialysis centers. Total enumeration was used with a total of 70 respondents and was analyzed using frequency and percentage distribution.

Results: Findings revealed that majority belong to 61-70 age bracket, college graduates, with family monthly income of Php <10,000, residence was >25 km away from the dialysis units, funded by PhilHealth, commuting on a tricycle. Some patients were not attending dialysis treatment due to transportation and financial problems. Majority were diagnosed in 2017-2019, due to diabetic nephropathy and had twice a week dialysis schedule with four hours duration. Majority follow their dialysis schedule and medication schedule. Two-thirds of the respondents were taking >5 drugs and it was a concern because of the cost.

Conclusion: The study showed that high level of education with insurance and with a good physician-patient relationship suggests better adherence to their treatment regimen. In contrast, older age, low household income, more distant residence from the dialysis centre, commuters, and high medication intake may result in non-adherence to their hemodialysis and medication therapy.

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- Revues d'articles courants, de livres et de films;
- Articles en formation continue.

Comment les manuscrits doivent-ils être présentés?
Forme : Le manuscrit doit être présenté à double interligne avec une marge de 1 po et une numérotation consécutive des pages dans le coin supérieur droit de la page. Les articles plus formels de recherche ou d'études cliniques doivent compter de 5 à 15 pages. Les articles moins formels, tels que textes narratifs, questions-réponses ou revues, doivent compter moins de 5 pages.

Style : Le style du manuscrit doit être conforme au manuel de publication de l'Association américaine de psychologie (AAP), 7e édition (2020).

Page titre : La page titre doit inclure le titre du manuscrit ainsi que les renseignements suivants : nom de chacun des auteurs (y compris les prénoms au complet), titres professionnels (c.-à-d. inf., B.Sc. Inf., CNéph[C]), titre du poste occupé, nom de l'employeur, adresse, numéros de téléphone et de télécopieur et adresses courriel. L'adresse privilégiée de correspondance doit aussi être indiquée.

Résumé : Sur une page distincte, les articles formels de recherche ou d'études cliniques doivent être accompagnés d'un résumé de 100 à 150 mots, reprenant brièvement les principaux points du manuscrit.

Texte/Liste de références : Les sigles, abréviations ou acronymes doivent être écrits au long la première fois qu'ils apparaissent dans le texte, suivis de l'abréviation entre parenthèses : p. ex., Association canadienne des infirmières et infirmiers et des technologues de néphrologie (ACITN). Les noms génériques des médicaments doivent être employés. Les unités de mesure doivent être indiquées selon le Système international d'unités (SI). Les références doivent être citées dans le texte en utilisant le format de l'AAP. Une liste de références comprenant la bibliographie complète de toutes les références utilisées doit suivre le texte.

Tableaux/Figures : Les manuscrits ne doivent inclure que les tableaux et figures (incluant schémas, illustrations, croquis, etc.) visant à clarifier certains détails. Les auteurs qui utilisent des tableaux et des figures qui ont déjà fait l'objet d'une publication doivent fournir l'autorisation écrite de l'éditeur d'origine et la joindre au manuscrit soumis. La mise en forme des tableaux et des figures doit être conforme au style de l'AAP.

De quelle manière doit-on soumettre les manuscrits?
Veuillez envoyer par courriel votre manuscrit à : **cannt.journal1@gmail.com**.

Veuillez inclure une lettre de présentation en précisant les coordonnées de l'auteur principal ainsi qu'une notice biographique d'une phrase (incluant titres de compétences, titre du poste actuel et lieu de travail) pour chaque auteur.

Quel est le processus de sélection des manuscrits pour publication dans le *Journal ACITN*?
À la réception de chaque manuscrit, un accusé de réception est envoyé. Les articles de recherche et d'études cliniques sont envoyés à deux membres du comité de révision du *Journal ACITN* afin d'être révisés suivant un processus à double insu. Tous les articles peuvent être retournés aux auteurs pour révision et nouvelle soumission par la suite. Les manuscrits acceptés pour publication peuvent subir des changements éditoriaux; toutefois, les auteurs pourront approuver ces changements. La rédactrice en chef se réserve le droit d'accepter ou de refuser tout manuscrit. Les critères d'acceptation pour tous les manuscrits comprennent l'originalité des idées, l'actualité du sujet, la qualité du matériel et l'attrait des lecteurs. Les manuscrits qui ne sont pas conformes à la mise en forme et au style de l'AAP seront renvoyés à l'auteur ou aux auteurs.

Quelles sont les conséquences du transfert des droits d'auteur?
Les auteurs doivent prendre note que les manuscrits seront considérés pour publication à la condition qu'ils ne soient soumis qu'au *Journal ACITN*. Sur acceptation du matériel soumis, les auteurs transfèrent leur droit d'auteur à l'ACITN. Les déclarations et opinions émises par les auteurs dans leurs articles, textes ou manuscrits demeurent leur responsabilité. Les auteurs conservent le droit d'insérer leurs travaux publiés respectifs dans une thèse ou un mémoire, pour autant que ces derniers ne soient pas publiés à des fins commerciales. Bien qu'aucune permission ne soit requise en pareil cas, il est attendu que les auteurs indiquent en référence le *Journal ACITN* comme source originale. Tous les autres documents ne peuvent être reproduits sans l'autorisation écrite de l'ACITN.

Aide-mémoire à l'intention des auteurs

✓ Lettre de présentation
✓ Article
- Page titre incluant les renseignements suivants :
  - Titre de l'article
  - Nom de chaque auteur (incluant prénoms au complet)
  - Titres de compétence
  - Titre du poste actuel
  - Nom et adresse de l'employeur
  - Nom de l'auteur à qui la correspondance doit être envoyée (y compris adresse, numéros de téléphone et de télécopieur et adresse courriel)
  - Texte de l'article avec résumé, s'il y a lieu à **double interligne et pages numérotées**
- Références (sur une feuille distincte)
- Tableaux (un par page)
- Figures (une par page)
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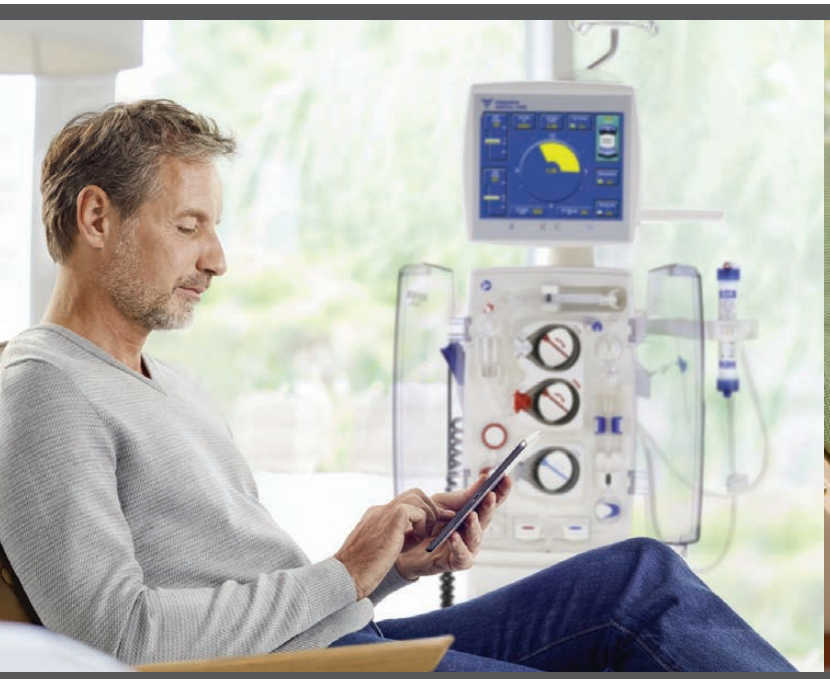

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