CANNT JOURNAL
JOURNAL ACITN

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

Volume 23, Issue 4 October–December 2013

IN THIS ISSUE:

Ensure **Safe Water** while Saving Water

BioPure **HX2**

Featuring

End-to-End Automatic Heat Disinfection
Simplifies bacteria control, including the dialysis machine

Self-Modulating Valves & High Efficiency Motors
Automatically adjusts flow and pressure for water conservation

Double Pass Reverse Osmosis with Single Pass Redundancy
Ensures the highest water quality, while allowing for continual operation

Licensed with Health Canada & Capable of Producing Water for Hemodiafiltration
Manufactured in Canada

Local Service Throughout **Canada**

Mar Cor Purification is the leading manufacturer and service provider of portable and central heat disinfection hemodialysis water systems in North America.

We have been manufacturing and servicing water treatment equipment for over 40 years and have an experienced team of technicians qualified to work on your water systems based out of our **Burlington, ON** and **Montreal, QC** offices.

MAR COR® PURIFICATION
A Cantel Medical Company

Competent, Consistent, & Compliant

ISO 13485:2003 Certified • 800-268-5035 • **www.mcpur.com**

Ontario Location
Mar Cor Purification
3250 Harvester Road- Unit 6
Burlington, ON L7N 3W9

Montreal Location
Mar Cor Purification
85 Lindsay Avenue
Dorval, QC H9P 2S6

OCTOBER–DECEMBER 2013 • VOLUME TWENTY-THREE • ISSUE FOUR

CANNT JOURNAL
JOURNAL ACITN

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

CONTENTS

IN EACH ISSUE:

The CANNT Journal is printed on recycled paper.

The CANNT Journal is the official publication of the Canadian Association of Nephrology Nurses and Technologists, P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0, telephone: (519) 652-6767, fax: (519) 652-5015, email: cannt@cannt.ca. Published quarterly, the journal is received by all members of CANNT. Subscriptions are: Canada $50.00 (plus HST), US. $60.00, Outside N. America $85.00. Back issues, when available, are $7.50 (+HST) per issue and are available from the editor. Opinions expressed by writers in the CANNT Journal are not necessarily those held by the editor or CANNT. Contrasting views by our readership and membership are welcome. All letters, comments and articles are to be sent to the CANNT office, P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0.

1-877-720-2819
Website: www.cannt.ca

Deadlines for submission to the CANNT Journal are:
Jan.–Mar.: Jan. 15, for publication Mar. 15;
Apr.–Jun.: April 15, for publication Jun. 15;
Jul.–Sep.: Jul. 15, for publication Sep. 15;
Oct.–Dec.: Oct. 15, for publication Dec. 15.

The CANNT Journal is indexed in the Cumulative Index to Nursing and Allied Health Literature (CINAHL), the International Nursing Index (INI), MEDLINE, EBSCO, ProQuest and Thomson Gale.

ISSN 2291-644X (Online)
ISSN 1498-5136 (Print)

The CANNT Journal is produced by Pappin Communications, The Victoria Centre, 84 Isabella St., Pembroke, Ontario K8A 5S5

Thank you to our 2013 reviewers!

Janet Baker

Alison Thomas

As CANNT Journal co-editors, we pride ourselves on the peer review process that is in place to ensure that the articles we put forward for publication are of high quality and interest to you, as Journal subscribers. We are very grateful to our many reviewers who gave of their time and expertise in 2013 to carry out manuscript reviews. To the following reviewers, thank you for promoting and advancing nephrology nursing practice in Canada. We couldn't do it without you!

Jill Campbell, RN, MHSc, CHE
Regional Director, Ontario Renal Network
Program Director, St. Michael's Hospital
Toronto, ON

Billie Hilborn, RN, BScN, MHSc, CNeph(C)
Hemodialysis Educator
Sunnybrook Health Sciences Centre
Toronto, ON

Ann Jones, RN(EC), MSN, CNeph(C)
Nurse Practitioner, Hemodialysis
St. Michael's Hospital
Toronto, ON

Betty Kelman, RN(EC), MEd, CNeph(C)
Nurse Practitioner, Nephrology
University Health Network
Toronto, ON

Eleanor F. Ravenscroft, CNeph(C), RN, MSN, PhD
University of Calgary, Faculty of Nursing
Calgary, AB

Jane Ridley, RN, MScN, CNeph(C)
Nurse Practitioner/Clinical Nurse Specialist, Nephrology
University Campus, London Health Sciences Centre
London, ON

Arti Sharma Parpia, RD
Hemodialysis Dietitian
St. Michael's Hospital
Toronto, ON

Beverly Watson, RN(EC), MN/ACNP, CNeph(C)
Nurse Practitioner
Regional Kidney Care Program, Simcoe/Muskoka
Orillia, ON

Diane Watson, RN(EC), MSc, CNeph(C)
Nurse Practitioner, Nephrology
University Health Network
Toronto, ON

Nancy Webster, RN, CNeph(C), BScN, MHScN
Program Director Nephrology, Regional Director, MH LHIN
Halton Healthcare Services Corporation
Oakville, ON

Ms. Barbara Wilson, RN(EC), MScN, CNeph(C)
Nurse Practitioner,
London Health Sciences Centre, Victoria Hospital,
London, ON

Marsha Wood, BN, RN, MN, CNeph(C)
Nurse Practitioner Nephrology
QEII Health Sciences Centre
Halifax, NS

Merci à nos lectrices critiques de 2013!

Janet Baker

Alison Thomas

En tant que corédactrices en chef du Journal de l'ACITN, nous sommes fières du processus d'évaluation par les pairs qui a été mis en place pour garantir la qualité exceptionnelle des articles que nous publions et veiller à ce que ces articles présentent un grand intérêt pour nos abonnés. Nous sommes reconnaissantes envers nos nombreuses lectrices critiques, qui ont consacré un temps précieux ainsi que leur expertise en 2013 à l'évaluation de manuscrits. Merci à toutes les lectrices énumérées ci-dessous, qui ont contribué à la promotion et à la progression de la pratique des soins infirmiers spécialisés en néphrologie au Canada. Nous n'aurions pas pu y arriver sans vous!

Jill Campbell, inf., M.Sc.S., cadre supérieure dans le domaine des soins de santé
Directrice régionale, Ontario Renal Network
Directrice de programme, hôpital St. Michael's
Toronto (Ontario)

Billie Hilborn, inf., B.Sc.inf., M.Sc.S., CNéph(C)
Formatrice en hémodialyse
Sunnybrook Health Sciences Centre
Toronto (Ontario)

Ann Jones, inf. (cat. spéc.), M.Sc. (soins infirmiers), CNéph(C)
Infirmière praticienne, hémodialyse
Hôpital St. Michael's
Toronto (Ontario)

Betty Kelman, inf. (cat. spéc.), M.Éd., CNéph(C)
Infirmière praticienne, Néphrologie
University Health Network
Toronto (Ontario)

Eleanor F. Ravenscroft, CNéph(C), inf., M.Sc. (soins infirmiers), Ph.D.
Université de Calgary
Faculté des sciences infirmières
Calgary (Alberta)

Jane Ridley, inf., M.Sc. (soins infirmiers), CNéph(C)
Infirmière praticienne/Infirmière clinicienne spécialisée, Néphrologie
Campus du London Health Sciences Centre
London (Ontario)

Arti Sharma Parpia, Dt.P.
Diététiste spécialisée en hémodialyse
Hôpital St. Michael's
Toronto (Ontario)

Beverly Watson, inf. (cat. spéc.), M.Sc.Inf./IPSA, CNéph(C)
Infirmière praticienne
Programme régional de soins en néphrologie, Simcoe/Muskoka
Orillia (Ontario)

Diane Watson, inf. (cat. spéc.), M.Sc., CNéph(C)
Infirmière praticienne, Néphrologie
University Health Network
Toronto (Ontario)

Nancy Webster, inf., CNéph(C), B.Sc.Inf., MH.Sc.N.
Directrice du programme de néphrologie, directrice régionale, RLISS – santé mentale
Halton Healthcare Services Corporation,
Oakville (Ontario)

Barbara Wilson, inf. (cat. spéc.), M.Sc. (soins infirmiers), CNéph(C)
Infirmière praticienne
London Health Sciences Centre, hôpital de Victoria
London (Ontario)

Marsha Wood, inf., B.Sc.inf., M.Sc.Inf., CNéph(C)
Infirmière praticienne, Néphrologie
Queen Elizabeth II Health Sciences Centre
Halifax (Nouvelle-Écosse)

Le Journal ACITN est la publication officielle de l'Association canadienne des infirmiers/infirmières et technologues en néphrologie, a/s P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0, téléphone : (519) 652-6767, télécopieur : (519) 652-5015, Courriel : cannt@cannt.ca. Publié quatre fois par année, ce journal est envoyé à tous les membres de l'Association. L'abonnement annuel est: Canada, 50 $ (+TVH), E.-U., 60 $, hors du Canada et E.-U., 85 $. Les publications antérieures, lorsque disponibles, coûtent 7,50 $ (+TVH) chacune. Les opinions émises par les auteurs dans ce journal ne sont pas nécessairement partagées par l'Association ni par le rédacteur en chef. Nous invitons les lecteurs à nous faire part de leurs opinions. Toute correspondance devra être envoyée à l'ACITN, P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0.

1-877-720-2819
Site web : www.cannt.ca

Voici les échéanciers à rencontrer pour soumettre des articles/nouvelles au journal :

Janv.–mars : le 15 janv., pour publication le 15 mars
Avril–juin : le 15 avril, pour publication le 15 juin
Juil.–sept. : le 15 juil., pour publication le 15 sept.
Oct.–déc. : le 15 oct., pour publication le 15 déc.

Le journal CANNT est maintenant répertorié dans le « Cumulative Index to Nursing and Allied Health Literature (CINAHL) », « International Nursing Index » (INI), « MEDLINE », « EBSCO », « ProQuest » et « Thomson Gale ».

ISSN 2291-644X (En ligne)
ISSN 1498-5136 (Dans la presse)

Le journal CANNT est préparé par Pappin Communications
The Victoria Centre, 84 rue Isabella, Pembroke, Ontario K8A 5S5.

Glancing back with a view to the future

Where has the time gone? It is hard to believe that it has been a year since I started my term as your CANNT President. It certainly has been a busy year for the association. One of the major projects that we undertook this year was to ensure that we had all of the necessary documents required for compliance with the new Canadian Not-For-Profit Corporations Act. At our Annual General Meeting (AGM) in October, members of CANNT voted to approve the documents and revised bylaws, and a motion was passed to file with Industry Canada. A very special thank you goes out to CANNT members Marsha Wood, Linda Ballantine and Patty Quinan for all of their efforts in completing this important work.

From October 5–8, St. John's, Newfoundland and Labrador, hosted our 46th annual national conference "Rally on the Rock—New Found Realties in Nephrology Nursing and Technology". I am sure the sold-out crowd of 500+ delegates, exhibitors and invited speakers can attest to the excellent calibre of the program including keynote speakers, concurrent session presenters, poster presentations, exhibits, and the evening of entertainment. The planning committee led by Anne Roswell and Cheryl Harding did an outstanding job and deserve our gratitude. Congratulations also to the award and bursary winners who were recognized during the AGM in St. John's. A complete list of the winners may be found in this issue of the journal.

Looking forward, please keep the dates in mind for the next CANNT National Conference being held in beautiful Niagara Falls, Ontario, on October 23-25, 2014. The planning committee is already hard at work developing a program that will accelerate your professional growth, strengthen your practice as nephrology nurses and technologists, and provide an excellent opportunity to network with colleagues.

As I complete my term as president, I would like to thank the board of directors for its hard work and ongoing commitment to our national organization. It is through the dedication of volunteers like these and the membership who support our association in so many ways that CANNT continues to thrive.

Specifically, I would like to extend my appreciation and bid a fond farewell to those leaving the board: Carolyn Bartol, VP Atlantic; Roch Beauchemin, VP Quebec; Florence Holder, Website Coordinator/ Treasurer; and Marilyn Muir, Past-President. I would also like to welcome new BOD members Karen MacDonald, VP Atlantic; Nancy Filteau, VP Quebec; Melanie Wiggins, Website Coordinator/Treasurer; and Anne Moulton, President-Elect. And last, but certainly not least, I wish to thank those members continuing on the board: Rejean Quesnelle, VP Technologists; Heather Dean, VP Western Region; Krista Lovering, VP Ontario; Janet Baker and Alison Thomas, CANNT Journal Co-Editors and our new President, Roberta Prettie.

CANNT also needs you—our members—to help keep our association strong. Our membership numbers have increased since last year and we would like to see that trend continue. If you are not a member, we encourage you to consider becoming a member today. There are many benefits to CANNT membership: the

continued on page 8...

Retour en arrière et perspective d'avenir

Comme le temps passe vite! J'ai du mal à croire que j'ai entrepris mon mandat de présidente de l'ACITN il y a déjà un an de cela. Chose certaine, l'association a connu une année des plus actives. L'un des principaux projets que nous avons entrepris cette année consistait à vérifier si nous avions en main tous les documents nécessaires pour être conformes à la nouvelle Loi canadienne sur les organisations à but non lucratif. Au cours de notre assemblée générale annuelle du mois d'octobre, les membres de l'ACITN ont voté pour approuver les documents et les règlements administratifs revus et corrigés et une motion a été adoptée pour produire une déclaration auprès d'Industrie Canada. Je remercie tout particulièrement Marsha Wood, Linda Ballantine et Patty Quinan, membres de l'ACITN, pour les efforts qu'elles ont déployés afin de mener à bien cette tâche importante.

Notre 46e congrès annuel « Rallye sur le Roc », qui avait pour thème « Réalités nouvelles dans les soins infirmiers et les technologies en néphrologie », s'est tenu à St. John's, dans la province de Terre-Neuve-et-Labrador, du 5 au 8 octobre. Je suis certaine que la foule, qui comptait plus de 500 délégués, exposants et conférenciers, peut témoigner de l'excellente qualité de la programmation, qu'il s'agisse des orateurs principaux, des présentateurs de séances simultanées, des présentations par affiches, des éléments d'exposition ou de la soirée de divertissements. Le comité de planification, dirigé par Anne Roswell et Cheryl Harding, a fait un travail remarquable et mérite toute notre admiration. Je tiens par ailleurs à féliciter les récipiendaires des bourses et des prix qui ont été remis durant l'assemblée de St. John's. Vous trouverez une liste complète des récipiendaires dans ce numéro.

Pour ce qui est des événements à venir, n'oubliez pas de noter les dates du prochain congrès annuel de l'ACITN, qui se tiendra du 23 au 25 octobre 2014 dans la magnifique ville de Niagara Falls, en Ontario. Le comité de planification s'emploie déjà avec ardeur à élaborer une programmation axée sur l'épanouissement professionnel, sur la mise en valeur du métier d'infirmier ou infirmière et de technicien ou technicienne en néphrologie et sur le réseautage entre collègues.

En cette fin de mandat à titre de présidente, je tiens à remercier les membres du conseil d'administration pour leur travail acharné et pour leur engagement continu envers notre organisation nationale. La prospérité de l'ACITN est attribuable au dévouement de ces membres bénévoles et des autres membres qui appuient notre association de mille et une façons différentes.

Je souhaite tout particulièrement remercier et saluer pour une dernière fois les personnes qui quittent le conseil: Carolyn Bartol, vice-présidente de l'Atlantique, Roch Beauchemin, vice-président du Québec, Florence Holder, coordonnatrice du site Web et trésorière et Marilyn Muir, présidente sortante. Je tiens également à souhaiter la bienvenue aux nouveaux membres du conseil d'administration: Karen MacDonald, vice-présidente de l'Atlantique, Nancy Filteau, vice-présidente du Québec, Melanie Wiggins, coordonnatrice du site Web et trésorière et Anne Moulton, présidente élue. Enfin et surtout, je tiens

continued on page 8...

CANNT REPRESENTATIVES/ CONTACTS; REPRÉSENTANTS/ CONTACTS ACITN

CNA Liaison/Liaison pour AIIC:
Marilyn Muir RN, CNeph(C)
T: 204-787-3611; F: 204-787-7038
email/courriel: mrmuir@hsc.mb.ca

Kidney Foundation of Canada, MAC Representative/Fondation du rein—Comité de médical consultatif:
Colleen Wile, RN, BScN, CNeph(C)
T: 902-473-5868; F: 902-473-4168
email/courriel:
colleend.wile@cdha.nshealth.ca

Bursary Committee/ Comité des Bourses:
Colleen Wile, RN, BScN, CNeph(C)
T: 902-473-5868; F: 902-473-4168
email/courriel:
colleend.wile@cdha.nshealth.ca

CANNT Administrative Office/ Bureau National de l'ACITN:
PO Box 10, 59 Millmanor Place
Delaware, ON N0L 1E0
New phone: 519-652-6767
Same Toll Free: 877-720-2819
New fax: 519-652-5015
General email: cannt@cannt.ca

Contacts:
Sharon Lapointe,
Manager, Member Services
sharon@cannt.ca

Susan Mason
Manager, Website and Social Media
susan@cannt.ca

Heather Reid
National Administrator/Board
heather@cannt.ca

2014 Symposium: October 23–25, 2014 Congrès 2014: 23–25 octobre 2014 Niagara Falls, Ontario
Heather E. Reid, ARCT, MSc
Principal Planner & Owner
Innovative Conferences & Communications
PO Box 319, 59 Millmanor Place
Delaware, ON N0L 1E0
T: 519-652-0364
F: 519-652-5015
Email: hreid@innovcc.ca
Website: www.innovcc.ca

Journal advertising contact/Personne contact pour la publicité du Journal:
Heather Coughlin
Pappin Communications,
84 Isabella Street, Pembroke, ON K8A 5S5
T: 613-735-0952; F: 613-735-7983
email/courriel: heather@pappin.com
rate card: www.pappin.com

...continued from page 6

opportunity and ability to network with colleagues from across Canada and beyond through national and regional conferences (to which CANNT members receive a discount), access to additional sections of the website, involvement with the refined clinical practice groups, the opportunity to apply for and receive bursaries, grants or awards of excellence (which are only available to CANNT members),the opportunity to seek positions on the BOD or to act as a liaison to the VP in your region, and access to the CANNT Journal online.

CANNT is only as strong as its members! Encourage others to join today at **www.cannt.ca** or call toll free at 1-877-720-2819.

In closing, I wish to thank you for allowing me to represent you as your president this past year. I look forward to continuing on at the board level as past-president in 2014, the 46th anniversary of CANNT. We will continue to represent the vision first identified by Fran Boutilier and a handful of others to provide a strong voice and to advocate for renal patients and their families. Together we can make a difference in providing leadership and promoting the best nephrology care and practice through education, research and communication.

Colleen Wile, RN, BScN, CNeph(C)
CANNT President 2012–2013

...continued from page 7

à remercier les membres qui continueront de siéger au conseil d'administration : Rejean Quesnelle, vice-président de la Technologie, Heather Dean, vice-présidente de l'Ouest canadien, Krista Lovering, vice-présidente de l'Ontario, Janet Baker et Alison Thomas, corédactrices en chef du Journal de l'ACITN et notre nouvelle présidente, Roberta Prettie.

L'ACITN a également besoin de vous, chers membres, puisque vous contribuez à assurer la prospérité de notre association. Le nombre de membres a augmenté depuis l'année dernière et nous souhaitons voir cette tendance se poursuivre. Si vous n'êtes pas membre, nous vous encourageons à le devenir dès aujourd'hui. Le fait d'être membre de l'ACITN comporte de nombreux avantages, soit la possibilité de réseauter avec des collègues de partout au Canada et de l'étranger lors de congrès régionaux et nationaux (offerts à tarif réduit pour les membres de l'ACITN), un accès aux sections réservées aux membres du site Web, une participation active à des groupes de pratique clinique triés sur le volet, la possibilité de demander et de recevoir des bourses, des subventions ou des prix d'excellence (offerts uniquement aux membres de l'ACITN), la possibilité de briguer un poste au conseil d'administration ou d'agir à titre d'agent de liaison pour le vice-président ou la vice-présidente de votre région et un accès au Journal de l'ACITN en ligne.

L'ACITN puise sa force dans ses membres! Encouragez vos collègues à devenir membres dès aujourd'hui en allant à l'adresse **www.cannt.ca** ou en composant le numéro sans frais 1-877-720-2819.

Pour conclure, je vous remercie de m'avoir offert la possibilité de vous représenter à titre de présidente pour l'année qui se termine. Je serai heureuse de poursuivre mon travail au sein du conseil d'administration à titre de présidente sortante pour l'année 2014, qui marque le 46e anniversaire de l'ACITN. Nous continuerons de mettre en pratique la vision définie à l'origine par Fran Boutilier et une poignée d'autres selon laquelle nous devons donner la parole aux patients souffrant de maladies rénales et à leur famille et défendre les intérêts de ces gens. Ensemble, nous pouvons faire une différence grâce à notre leadership et à la promotion de soins de qualité et de pratiques exemplaires en néphrologie par l'éducation, la recherche et la communication.

Colleen Wile, inf., B.Sc.inf., CNéph(C)
Présidente de l'ACITN 2012–2013

NOTICE BOARD

- Ottawa Supper Clubs—contact Janet Graham, Nephrology Unit, Ottawa Hospital, **jgraham@ottawahospital.on.ca**
- February 8–11, 2014. Annual Dialysis Conference, Atlanta, Georgia. Website: **http://medicine.missouri.edu/dialysis/**
- April 5, 2014. Exam date for CNeph(C) certification exam. Contact Canadian Nurses Association Certification program. Email: **certification@cna-aiic.ca**; Website: **www.cna-aicc.ca**; Toll free phone number: 1-800-361-8404
- April 13–16, 2014. 45th American Nephrology Nurses Association Symposium. Anaheim, California. Website: **www.annanurse.org**
- September 17, 2014. Nephrology Health Care Professionals Day.
- October 23–25, 2014. CANNT 47th National Symposium. Niagara Falls, Ontario. Conference Planner: Heather Reid: Email: **hreid@innovcc.ca**; Website: **www.cannt.ca**

THANKS TO OUR 2013 SPONSORS

PLATINUM

AMGEN® Roche Takeda bellco FRESENIUS MEDICAL CARE

SILVER

Baxter GAMBRO

BRONZE

Pfizer

Connect with CANNT!

Toll-free 1-877-720-2819
or local 519-652-6767

519-652-5015

Canadian-Association-Of-Nephrology-Nurses-And-Technologists

cannt@cannt.ca

CANNT National Office,
PO Box 10, 59 Millmanor Place,
Delaware, ON N0L 1E0

@CANNT1

SHARON LAPOINTE
Membership Coordinator
sharon@cannt.ca

SUSAN MASON
Website and Social Media
susan@cannt.ca

HEATHER REID
National Administrator
heather@cannt.ca

CANNT 2013 Rally on the Rock! New Found Realities in Nephrology Nursing and Technology

October 6–8, 2013 • St. John's, NL

From October 6–8, the CANNT Board of Directors, the planning committee, and approximately 450 participants celebrated and learned at CANNT 2013 held at the fabulous destination of St. John's, Newfoundland and Labrador.

The goal of the planning committee was to build a program that highlighted and identified "new found realities" in nephrology nursing and technology. Abstracts and keynote sessions reflected this theme, offering both evidence-based and experiential knowledge to conference attendees. Seven workshops, six plenary sessions, 45 concurrent sessions, 46 poster presentations, and 33 exhibitor booths assisted us in achieving our goals.

The conference plenary talks were outstanding! The conference opened with a compassionate appeal to "Health Care Leaders in the 21st Century" by Sister Elizabeth Davis; explored "moral distress and ethical challenges" with Dr. Rick Singleton; heard of "learned lessons from rocky and high places" with T.A. Loeffler; Kelly Buckley encouraged delegates to "adopt JOLT (Just One Little Thing)" into their personal and professional lives; discovered "psychonephrology" with a distinguished panel; and closed with "Fish Stew for the CANNT Pro's Soul" by Jim Hornell.

The highly anticipated "Rally in the Alley" was extremely successful and well received with 350 attendees—both delegates and exhibitors—experiencing the infamous George Street and nightlife that St. John's has to offer!

Continued commitment on behalf of the corporate sponsors played a large part in the success of the conference and we are always grateful for their generous support, as outlined below:

PLATINUM ($10,000+)
Amgen
Bellco Canada
Fresenius Medical Care
Roche
Takeda

GOLD ($7,500–$9,999)
Baxter

SILVER ($5,000–$7,499)
Gambro
NxStage Medical Canada Inc.

BRONZE ($2,500–$4,999)
Astellas Pharma Care
Charles River
High Purity Water Services
IBP
Pfizer
Sonosite

The Board of Directors of CANNT is grateful to all the nurses and technologists who travelled from across Canada to participate in this year's conference—we trust that our host city of St. John's, NL, delivered an exceptional experience for everyone.

The Board of Directors is also grateful to the CANNT 2013 Planning Committee for "rallying" together to create a conference that has set a new benchmark of excellence within our nephrology education events! Thanks are extended to the following committee members, coming from all over Newfoundland, who volunteered their time and expertise:

Cheryl Harding, BN, RN, MHS, CNeph(C)—Co-Chair
Anne Rowsell, RN, BN, CNeph(C)—Co-Chair
Laura Caines, RN, CNeph(C)
Tina Drainville, RN, CNeph(C)
Deanne Kenny, RN, CNeph(C)
Stefanie Roberts, Technologist
Evelena Verge, BScPharm
Paula Wheeler, RN, BN, CNeph(C)
Marilyn Muir, RN, BN, CNeph(C)—Board Liaison (Winnipeg)

Your board in action

Marilyn Muir, RN, CNeph(C), CANNT Past President 2012–2013

The purpose of this report is to inform CANNT members of current and upcoming activities of the Board of Directors (BOD). The BOD is composed of nine members; past president, president, president elect, VP (Ontario, Atlantic, Western, Quebec and Technical), and the website/financial coordinator. Our CANNT Journal co-editors and office management staff are also an integral part of the CANNT BOD and administrative team.

MEMBERSHIP

There are currently 540 CANNT members. CANNT is an association run by its membership, and maintaining membership continues to be a priority for the CANNT BOD. There are so many benefits to being a CANNT member including:

- Member access to the online CANNT Journal.
- Access on **www.cannt.ca** to the Members Only section.
- Reduced rates at the annual nephrology symposium/regional events.
- Access to CANNT Standards of Practice (Nursing) and the CANNT Technical Professional Practice Guidelines.
- Promotion of and support for specialty certification, CNeph(C).
- Continuing education opportunities.
- Awards, educational bursaries and research grants.
- Collaboration within the nephrology community.

We encourage you to maintain your yearly membership in support of the association.

FINANCES

The CANNT BOD and our office administration staff continue to make every effort to curb spending, and we continue to look for cost savings so we can maintain our viability through some of the following initiatives:

- We continue to hold our spring board meeting via teleconference to reduce expenses.
- We continue to use the Adobe Connect software, which has allowed us to have web-based meetings without incurring the costs associated with face-to-face meetings.
- We continue to hold our elections for BOD positions online; this has reduced the cost of mailing to our 500 plus members.
- Our peer-reviewed CANNT Journal is now available only online. This has eliminated costs associated with printing and mailing to the membership.

STRATEGIC PLANNING

- The BOD continues to develop our new strategic plan for 2013–2018, and we continue to look for growth and development opportunities for the association.
- Our goals remain consistent: to increase membership, to sustain the viability of the association, to communicate, to educate, to promote professional practice, to promote research, to support and facilitate partnerships, and to continue to produce our highly recognized peer-reviewed CANNT Journal.
- Our association bylaws were reviewed in 2013, and accepted at the AGM held in St. John's, NL, in October 2013.
- We are in the final stages of becoming compliant with the new Canadian Not for Profit (NFP) Corporations Act. Thank you to our NFP working group (Linda Ballantine, Patty Quinan and Marsha Wood) for working so hard to ensure CANNT is in a good position when the NFP changes take effect in October 2014.

JOURNAL

- Our CANNT Journal is a peer-reviewed journal and is distributed to members quarterly. The journal continues to be highly recognized as a resource for all nephrology health care professionals and is indexed through CINAHL, MEDLINE, and OVID databases.
- We encourage you to submit a research paper or article you think may be of interest to your fellow CANNT members to the journal. You can find the guidelines for authors on the CANNT website under the "CANNT Journal" section.
- Alison Thomas and Janet Baker have been doing a remarkable job as the co-editors of the CANNT Journal. You can email the co-editors if you have any questions or would like to discuss a potential manuscript or article at: **jbaker@haltonhealthcare.on.ca** or **thomasal@smh.ca**.
- The CANNT Journal is now an online publication. The content of the journal remains the same as the print version, but will only be accessible to members online through the CANNT website.

WEBSITE/SOCIAL MEDIA

- You will notice the CANNT website continues to grow and is updated regularly.
- You will find great information and, as a member, you have access to the "members only" section of the website. The online discussion forums are a great way to share information with colleagues across Canada. These forums can be accessed under the "members only" section.
- One of the newest additions to the website is the "News from the President" section, which is found under the "about" section—Board of Directors". This is where you can read the latest message from our new 2014 CANNT President Roberta Prettie.
- We encourage you to renew your CANNT membership by taking advantage of the easily accessed "renew now" box on the website.
- Career opportunities and coming events may be found on the home page—and this is just the beginning—please check out the CANNT website for more information at: **http://www.cannt.ca/en/index.html**

- You can also check out the different organizations that partner with CANNT from our website.
- Don't forget to follow CANNT on Twitter (**CANNT1**) and to "like" us on Facebook!

COMMUNICATION

- Communication continues to be a priority for the CANNT BOD. Communication between the BOD, our members, our corporate sponsors and our valued partners is key to maintaining a viable association.
- Our office administration may have changed, but our email address has not! Please contact us at **cannt@cannt.ca**, or use our toll free number: 1-877-720-2819. Sharon Lapointe and Susan Mason will be happy to assist you.
- We continue to disseminate information to our members through email blasts. You may also notice an email directing you to surveys that can be found on our CANNT website.
- You may have already received your copy of "The CANNT Connection" via email. This is an innovative way for us to communicate with our members. This newsletter will be sent to members monthly, and it contains important information about coming events, dates to remember, and other noteworthy news items.

ANNUAL CONFERENCE

- CANNT 2013, held in St. John's, NL, was a great success with more than 500 participants in total; this included 430 delegates from 10 provinces, one international delegate, exhibitors and faculty. We had 38 booths in our exhibit hall. More than 300 people participated in the evening of entertainment "Rally in the Alley". George Street will never be the same!
- Plans are underway for CANNT 2014 in Niagara Falls, Ontario, which will be held October 23–25 at the Scotiabank Convention Centre. The theme of CANNT 2014 is "Pursuing the Power Within".
- Co-chairs Anita Amos and Cindy Bryson have their planning committee organized and have already had a face-to-face meeting with conference planner Heather Reid. We hope to see you there!

STANDARDS OF PRACTICE

- The CANNT Technical Professional Practice Guidelines (technical standards) have been updated, and have been posted to the CANNT website. Thank you to the members who contributed to the review and changes. The technical guidelines were due for review in 2012.
- The CANNT nursing standards are in the process of being reviewed. The expected date of completion is December 2013.
- Both the technical guidelines and nursing standards can be found on the CANNT website under the heading "Standards of Practice".

AWARDS, BURSARIES AND GRANTS

- Information on the CANNT awards and bursaries that are available to members can be found on the CANNT website under the "Resources" tab.
- There is more than $26,000.00 available to our CANNT members.
- The deadline for applications is May 1st annually. Beginning this year, your application must include a photo along with your application.

NOMINATIONS COMMITTEE

- The call for nominations for Board of Director positions deadline is May 15, 2014.
- Positions available next year will be: President-elect, VP Western and VP Technologists.
- Being on the CANNT Board of Directors is a very rewarding opportunity, and is a great way to meet new colleagues, professional contacts and friends. Please consider applying for one of our vacant positions.
- You will have an opportunity to meet our 2014–2015 board members in Niagara Falls.

CANADIAN NURSES ASSOCIATION (CNA)

- 226 of our CANNT members are members of the Canadian Nurses Association, and 1,201 nurses are certified in nephrology across Canada.
- Professional certification demonstrates your commitment to the nephrology profession, and our association (CANNT) encourages all nephrology nurses who meet the certification criteria to write the CNA exam. We wish the best of luck to all the nurses who will be writing the next nephrology certification exam on April 5, 2014.
- Once again, we offered a pre-symposium workshop on writing the CNA exam in Ottawa. This pre-symposium session was well attended with 23 delegates. This workshop will also be made available at our 2014 conference in Niagara Falls.
- As the CNA representative for CANNT, I participated in five teleconferences involving the "specialty network" and one teleconference with CNA president Barb Mildon. This is where specialty areas (nephrology is only one of more than 40) across Canada discuss issues affecting their specialty and nursing in general. This is an excellent forum for sharing information.

NEPHROLOGY HEALTHCARE PROFESSIONALS DAY

- Nephrology Healthcare Professionals Day is held the 3rd Wednesday of September, annually. Our theme for Nephrology Healthcare Professionals Day is "Together We Make a Difference".

CANNT OFFICE OPERATION

Effective November 1, 2012, Innovative Conferences and Communications has taken over as our new association office managers. Sharon Lapointe is the contact person for CANNT, and she can be reached at **cannt@cannt.ca** or by calling our toll free number: 1-877-720-2819.

Respectfully submitted,
Marilyn Muir
Past President 2012–2013

Votre conseil d'administration en action

Marilyn Muir, inf., CNéph(C), Présidente sortante de l'ACITN 2012–2013

L'objectif de ce rapport est d'informer les membres de l'Association canadienne des infirmières et infirmiers et des technologues de néphrologie (ACITN) des activités actuelles et à venir du conseil d'administration (CA). Le CA est constitué de neuf membres : la présidente, la présidente sortante, la présidente élue, les quatre vice-présidentes et vice-présidents régionaux (Ontario, région de l'Atlantique, Ouest canadien et Québec), le vice-président de la Technologie et la coordonnatrice du site Web et trésorière. Les corédactrices en chef du Journal de l'ACITN et le personnel de gestion des bureaux font également partie intégrante du CA et des services administratifs de l'ACITN.

ADHÉSION

L'ACITN compte actuellement 540 membres. Il s'agit d'une association dirigée par ses membres, c'est pourquoi l'adhésion demeure une priorité pour le CA. Il y a de nombreux avantages à devenir membre de l'ACITN :

- Accès en ligne au Journal de l'ACITN.
- Accès à la section réservée aux membres du site **www.cannt.ca**.
- Réduction des tarifs d'inscription au congrès annuel de néphrologie et aux événements régionaux.
- Accès aux normes de pratique de l'ACITN en matière de soins infirmiers et à ses lignes directrices en matière de pratique technique professionnelle.
- Information sur la certification pour une spécialité (CNéph [C]) et encadrement lors du processus d'obtention de la certification.
- Possibilité de formation continue.
- Octroi de prix, de bourses d'études et de subventions de recherche.
- Collaboration au sein de la communauté de néphrologie.

Nous vous encourageons à renouveler votre abonnement annuel afin de soutenir notre association.

FINANCES

- Les membres du CA et le personnel administratif de l'ACITN continuent d'exercer une gestion serrée des dépenses et cherchent continuellement de nouvelles façons de réduire les coûts afin de maintenir la viabilité de l'association. Les points suivants représentent certaines des initiatives prises dans cette optique.
- Nous continuons de tenir notre réunion printanière du CA par téléconférence afin de réduire les dépenses.
- Nous continuons de privilégier l'utilisation du logiciel Adobe Connect, qui nous a permis d'organiser des réunions en ligne et d'éviter ainsi les coûts associés aux réunions en personne.
- Nous continuons d'organiser nos élections en ligne pour les postes au sein du CA, ce qui a permis de réduire les coûts associés aux nombreux envois postaux (plus de 500 membres).
- Le Journal de l'ACITN évalué par les pairs est maintenant accessible en ligne uniquement, ce qui a permis d'éliminer les coûts associés à l'impression et à l'envoi postal aux membres.

PLANIFICATION STRATÉGIQUE

- Le CA poursuit l'élaboration de notre plan stratégique pour 2013–2018; nous continuons de chercher des occasions de croissance et de développement pour l'association.
- Nos objectifs demeurent les mêmes, à savoir l'augmentation du nombre de membres, le maintien de la viabilité de l'association, la communication, l'éducation, la promotion de la pratique professionnelle et de la recherche, l'établissement de partenariats et la publication continue du Journal de l'ACITN, qui est une publication prestigieuse soumise à un comité de lecture.
- Les règlements administratifs de l'association ont été revus en 2013 et acceptés lors de l'assemblée générale annuelle qui s'est tenue en octobre 2013 à St John's, à Terre-Neuve-et-Labrador.
- Nous en sommes actuellement aux dernières étapes du processus qui nous permettra de satisfaire aux exigences de la nouvelle *Loi canadienne sur les organisations à but non lucratif*. Merci aux membres de notre groupe de travail sur les organisations à but non lucratif (Linda Ballantine, Patty Quinan et Marsha Wood) pour leur travail acharné en vue de s'assurer que nous serons prêts lorsque les changements apportés à la *Loi canadienne sur les organisations à but non lucratif* entreront en vigueur, en octobre 2014.

JOURNAL

- Le Journal de l'ACITN est une publication évaluée par les pairs et distribuée aux membres tous les trois mois. Cette publication hautement reconnue auprès de l'ensemble des professionnels en néphrologie pour sa valeur informative est indexée dans les bases de données CINAHL, MEDLINE et OVID.
- Nous vous encourageons à présenter aux corédactrices en chef vos articles ou vos rapports de recherche qui pourraient présenter un intérêt pour vos collègues. Vous trouverez des lignes directrices à l'intention des auteurs sur le site Web de l'ACITN, à la section « Journal de l'ACITN » (CANNT Journal).
- Alison Thomas et Janet Baker ont fait jusqu'à présent un travail remarquable en qualité de corédactrices en chef du Journal de l'ACITN. Si vous avez des questions ou désirez leur parler d'un article ou d'un manuscrit que vous souhaiteriez publier, n'hésitez pas à communiquer avec elles à l'une des adresses suivantes : **jbaker@haltonhealthcare.on.ca** ou **thomasal@smh.ca**.
- Le Journal de l'ACITN est désormais une publication en ligne. Le contenu de la publication est le même que dans la version papier, mais il sera

désormais accessible uniquement en ligne sur notre site Web.

SITE WEB ET MÉDIAS SOCIAUX

- Vous pourrez constater que notre site Web continue de prendre de l'expansion et qu'il est mis à jour régulièrement.
- Le site Web constitue une excellente source d'information et vous avez accès, en tant que membre, à la section réservée aux membres du site. Les forums de discussion offrent un excellent moyen de partager de l'information avec vos collègues de partout au Canada. Vous pouvez accéder à ces forums dans la section réservée aux membres.
- Le site présente une nouveauté, le « Mot de la présidente », que vous pourrez trouver à l'onglet « À propos de l'ACITN » (About), puis à la rubrique « Conseil d'administration » (Board of Directors). Vous pourrez y lire le dernier message de Roberta Prettie, présidente de l'ACITN.
- Nous vous encourageons à renouveler votre adhésion à l'ACITN en cliquant sur la boîte « Renouveler maintenant » (Renew Now) qui se trouve à la page d'accueil du site Web (en anglais seulement).
- Vous pouvez consulter les offres d'emploi et les événements à venir sur la page d'accueil, ce qui constitue une infime partie de ce à quoi vous avez accès. Pour en savoir plus, rendez-vous sur le site Web de l'ACITN, à l'adresse **http://www.cannt.ca/fr/index.html**.
- Vous pouvez également obtenir de l'information sur les différentes organisations qui font équipe avec l'ACITN en consultant notre site Web.
- N'oubliez pas de suivre l'ACITN sur Twitter (**CANNT1**) et « d'aimer » notre page Facebook!

COMMUNICATION

- La communication demeure une priorité pour le CA de l'ACITN. En effet, la communication entre le CA, les membres, nos commanditaires et nos précieux partenaires est essentielle pour garantir la viabilité de notre association.
- Notre bureau a changé d'adresse, mais notre adresse électronique est toujours la même! Vous pouvez communiquer avec nous par courriel à l'adresse **cannt@cannt.ca**, ou par téléphone en composant le numéro sans frais 1-877-720-2819. Sharon Lapointe et Susan Mason se feront un plaisir de répondre à vos questions.
- Nous continuons de transmettre l'information à nos membres par voie électronique. Vous recevrez aussi un avis par courriel vous redirigeant vers des sondages se trouvant sur notre site Web.
- Peut-être avez-vous déjà reçu votre exemplaire du bulletin d'information « The CANNT Connection » par courriel. Il s'agit pour nous d'une nouvelle façon de communiquer avec nos membres. Ce bulletin d'information, qui sera envoyé tous les mois aux membres, contient des renseignements sur les activités à venir et sur les dates à retenir et présente d'autres nouvelles dignes d'intérêt.

CONGRÈS ANNUEL

- Le congrès annuel de l'ACITN de 2013, qui s'est tenu à St John's, à Terre-Neuve-et-Labrador, a été un franc succès avec plus de 500 participants au total, dont 430 délégués canadiens provenant des dix provinces réunies, un délégué provenant de l'étranger, des exposants et des conférenciers. La salle des exposants était occupée par 38 kiosques. Plus de 300 personnes ont participé à la soirée de divertissements « Rally in the Alley ». La rue George ne sera plus jamais la même!
- Les préparatifs vont bon train pour le congrès annuel de l'ACITN de 2014, qui se tiendra du 23 au 25 octobre au centre des congrès de la Scotiabank à Niagara Falls, en Ontario. Le thème du congrès de l'ACITN de 2014 sera le suivant : « Pursuing the Power Within » (À la poursuite du pouvoir au sein de l'association).
- Anita Amos et Cindy Bryson, coprésidentes, ont mis sur pied leur comité organisateur et ont déjà tenu une réunion en personne avec Heather Reid, notre organisatrice d'événements. Nous espérons que vous serez des nôtres!

NORMES DE PRATIQUE

- Les lignes directrices de l'ACITN en matière de pratique technique professionnelle (normes de pratique technique) ont été mises à jour et publiées sur le site Web de l'ACITN. Merci aux membres qui ont collaboré à cette édition revue et corrigée. Les lignes directrices devaient faire l'objet d'une révision en 2012.
- Les normes de pratique en soins infirmiers sont en cours de révision. La révision devrait être terminée en décembre 2013.
- Les normes de pratique en soins infirmiers et les lignes directrices en matière de pratique technique sont accessibles en ligne sur notre site Web, sous l'onglet « Normes de la pratique » (Standards of Practice).

PRIX, BOURSES ET SUBVENTIONS

- Vous trouverez sous l'onglet « Ressources » (Resources) du site Web de l'ACITN toute l'information relative aux prix, aux bourses et aux subventions.
- Un fonds de plus de 26 000 $ est réservé aux membres de l'ACITN.
- La date limite pour déposer une candidature est le 1er mai de chaque année. Depuis cette année, vous devez ajouter une photo à votre demande.

COMITÉ DE MISES EN CANDIDATURE

- La date limite pour soumettre une candidature pour un poste au sein du CA est le 15 mai 2014.
- Les postes vacants cette année sont les suivants : président élu ou présidente élue, v.-p. pour la région de l'Ouest canadien et v.-p. de la Technologie.
- Il est très gratifiant de faire partie du conseil d'administration de l'ACITN, ce qui constitue également une excellente façon de rencontrer de nouveaux collègues et de créer de nouveaux liens professionnels ou amicaux. Nous vous invitons à poser votre candidature pour l'un des postes vacants.

- Vous aurez l'occasion de rencontrer les nouveaux membres du CA lors du congrès annuel à Niagara Falls.

ASSOCIATION DES INFIRMIÈRES ET INFIRMIERS DU CANADA (AIIC)

- Nous comptons au sein de l'ACITN 226 membres qui sont également membres de l'AIIC; par ailleurs, 1 201 infirmières et infirmiers sont certifiés en néphrologie au Canada.
- La certification professionnelle témoigne de votre engagement envers la profession infirmière en néphrologie. Notre association encourage toutes les infirmières et tous les infirmiers du domaine de la néphrologie qui répondent aux critères de la certification à s'inscrire à l'examen de l'AIIC. Nous tenons à féliciter toutes les personnes qui se sont inscrites à l'examen du 5 avril 2014.
- Une fois de plus, nous avons offert un atelier de préparation à l'examen de l'AIIC en avant-première du congrès annuel à Ottawa. Pas moins de 23 délégués ont participé à cet atelier, qui sera également offert lors du congrès de 2014 à Niagara Falls.
- À titre d'agente de liaison de l'AIIC pour l'ACITN, j'ai participé à cinq téléconférences auxquelles participaient également des membres du « réseau des spécialités » et à une téléconférence avec Barb Mildon, présidente de l'AIIC. Il s'agit d'une plateforme qui permet à tous les délégués des domaines de spécialité de partout au Canada (la profession comporte plus de 40 spécialités, dont la néphrologie) de discuter des enjeux qui touchent leur spécialité et les soins infirmiers en général. Ce forum de discussion est tout indiqué pour partager de l'information.

JOURNÉE DES PROFESSIONNELS DE LA SANTÉ EN NÉPHROLOGIE

- Une Journée des professionnels de la santé en néphrologie est organisée chaque année, le troisième mercredi de septembre.
- Voici le thème de cette année : « Ensemble, nous pouvons faire la différence » (Together we make a difference).

SERVICES ADMINISTRATIFS DE L'ACITN

Depuis le 1er novembre 2012, l'agence Innovative Conferences and Communications a pris la relève à titre de nouveau gestionnaire administratif de notre association. Sharon Lapointe est notre personne-ressource pour l'ACITN. Vous pouvez la joindre à l'adresse **cannt@cannt.ca** ou en appelant au numéro sans frais 1-877-720-2819.

EDTNA report

Marilyn Muir, RN, CNeph(C), Past President

Through our collaboration with the European Dialysis and Transplant Nurses Association, I attended the 42nd annual EDTNA conference in Malmo, Sweden from August 31 to September 3, 2013. There were more than 980 delegates, 162 poster presentations, and representatives from 48 countries. The Czech Republic had the most members in attendance with 93 delegates. The current president of EDTNA is Maria Saraiva, who lives in Portugal.

The conference started with a two-hour presentation by four companies (Amgen, Fresenius, B-Braun and Gambro). They presented on group projects being carried out between the four respective companies and an EDTNA representative. This was an intriguing concept that perhaps CANNT can consider in the future.

The projects presented were as follows:

- Multilingual patient education documents for renal nurses—patient info translated into different European languages (B Braun)
- Vascular access guidelines (Fresenius)
- Anemia management, guidance on anticoagulation, adequacy (Gambro)
- Secondary hyperparathyroidism (Amgen).

Their board of directors consists of only four members—president, secretary, treasurer, and one executive member. The president is selected by the executive committee—it is not an elected position. They also have an executive director and three supervisory roles.

I attended the President's Meeting, which was an hour-long meeting with representatives from 18 countries in attendance. These representatives are the "leads" for their country's nephrology association. Maintaining membership is an issue for the European association, just as it is for our association. They have only 1,340 members in total. The nurses may be a member of their country's nephrology association or governing body, but not all of them belong to EDTNA. Both CANNT and ANNA representatives were given a complimentary one-year membership to EDTNA, which allowed us to vote at the AGM.

Maria Saraiva, EDTNA President, and Marilyn Muir, CANNT Past President

The flow of the European conference is a bit different than our CANNT conference. There were only three simultaneous sessions of 1.5 hours each, but within each time slot, four to six related topics were covered. Each presenter, therefore, had about 15 to 20 minutes to present their topic. This approach seemed to hold the audience's attention, and provided opportunity for more information to be shared from different regions. They also had a "short oral session" with 10 presenters who were allotted five to six minutes each to discuss research projects that had been carried out in their units.

Perspectives of significant others in dialysis modality decision-making: A qualitative study

Alexis de Rosenroll, Kathryn Smith Higuchi, Katherine Standish Dutton, Mary Ann Murray, and Dawn Stacey

ABSTRACT

Objective: *To explore the experience of the dialysis modality decision-making process from the perspective of the significant other.*

Methods: *A qualitative interpretive description study was conducted using the Interprofessional Shared Decision Making Model (Légaré et al., 2011). Data collection included one-on-one, semi-structured interviews, the Decisional Regret Scale, and the SURE tool.*

Results: *Ten significant others were interviewed. They included wives, husbands, and daughters of dialysis patients. Their roles involved providing a positive outlook, "being with", advocating, caregiving, learning together, sharing opinions, and communicating values, preferences and treatment feasibility. Broader factors influencing significant others included choosing life, unanticipated life change, and personal health problems. Implementation of the chosen modality resulted in unanticipated events, relationship changes and challenges to travelling.*

Conclusion: *Significant others play supportive roles for dialysis patients and are involved in the decision-making process associated with treatment decisions. Significant others may have concurrent emotional, informational, and physical needs that affect their role in making and/or implementing the decision.*

Keywords: *dialysis, shared decision making, significant other, home renal dialysis, qualitative study*

Alexis de Rosenroll, RN, MScN, CNeph(C), University of Ottawa, Ottawa, ON

Kathryn Smith Higuchi, RN, PhD, Associate Professor, School of Nursing, University of Ottawa, Ottawa, ON

Katherine Standish Dutton, MSW, RSW, Social Work, Family Health Team, Ottawa, ON

Mary Ann Murray, RN, MScN, PHD, CON(C), GNC(C), CHPCN(C), Advance Practice Nurse, Home Dialysis Unit, The Ottawa Hospital, Adjunct Professor, School of Nursing, University of Ottawa, Ottawa, ON

Dawn Stacey, RN, PhD, CON(C), University of Ottawa, University Research Chair in Knowledge Translation to Patients, Director, Patient Decision Aids Research Group, Scientist, Ottawa Hospital Research Institute, Ottawa, ON

Address correspondence to: Dawn Stacey, RN, PhD, CON(C), 451 Smyth Road, Ottawa, ON K1H 8M5

Email: ***dstacey@uottawa.ca***

Submitted for publication: May 6, 2013.

Accepted for publication in revised form: October 10, 2013.

INTRODUCTION

Evidence-based decision-making in health care has evolved with the expansion of therapeutic interventions and with patients wanting to be more informed and having a more autonomous role in their treatment decisions (Entwistle & Watt, 2006). Management of patients with chronic kidney disease is no exception. When renal function becomes unsustainable, patients typically face options including renal replacement therapy (RRT), transplant, and supportive end-of-life care. For patients choosing dialysis, modality choices include: hemodialysis (at an in-centre facility or at home) or peritoneal dialysis. These types of complex decisions are often influenced by significant others; those recognized by the patient as being most important to their own well-being (Wuerth et al., 2002; Stiggelbout et al., 2007; Morton et al., 2010; Murray et al., 2009).

Social support for patients on renal replacement therapy enhances outcomes including decreased technique failure in peritoneal dialysis and increased fluid control adherence (Carey et al., 1990; Kara, Caglar, & Kilic, 2007). Conversely, the absence of social support for patients during RRT has been found to result in higher mortality, increased hospitalizations, lower patient satisfaction scores, and poorer quality of life (Untas et al., 2010; Plantinga et al., 2010). Although there are clear benefits to patients receiving social support, this study is unique in providing insight into the significant other's experience during the process of dialysis modality decision-making.

Despite clear indications of the importance of significant others in making and implementing decisions, there is

an apparent void in research related to their needs. In fact, more than half of dialysis patients receive support from unpaid caregivers (Suri et al., 2011). Patients receiving dialysis have, themselves, reported wanting more research about support for their caregivers (Tong et al., 2008).

This study focused on the experience of the dialysis decision-making process from the perspective of the significant other. The specific research questions were: What is the role of the significant other in the modality decision-making process? What factors influence making and implementing decisions from the significant other's perspective? And, how can health professionals better support the significant other in the decision-making process?

METHODS

Design

A qualitative interpretive description study (Thorne, 2008) was utilized. Development of the study was guided by the Interprofessional Shared Decision Making model (IP-SDM) (Appendix A) (Légaré et al., 2011). This model provides a unique approach to shared decision-making in health care by expanding on the traditional dyadic patient/physician decision-making model to recognize the roles of the interprofessional team, as well as family members, surrogates, and significant others (Légaré et al., 2011). According to the IP-SDM model, the decision process involves a series of iterative steps: making the decision explicit, exchanging information on options (benefits and harms), clarifying values, considering the feasibility of options, identifying a preferred choice, and implementing the decision. An underlying assumption of this framework is that family members or significant others are important stakeholders involved or implicated in the decision, and their values and preferences may not be consistent with the patients.

The model assisted the researchers in developing the research questions and interview guide through a process of "scaffolding". Scaffolding is defined as the process whereby the research questions are situated within the context of current knowledge and research (Thorne, 2008). The study was specifically aimed at identifying/exploring the role the significant other plays in the decision-making process. The results of this study will also validate and possibly contribute to the existing definitions in shared decision-making theory. Ethics approval was obtained from the Ottawa Hospital Research Ethics Board.

Participants and setting

Participants were recruited from a regional nephrology program at a large tertiary hospital serving an urban- and rural-based population of approximately 1.3 million. A significant other was self-defined by the patient as the person most important to their well-being. Eligible participants were: 1) a significant other of a patient who had made a decision about dialysis treatment modality within the past six months and was currently receiving dialysis treatment, 2) over 18 years of age, and 3) able to answer questions in English.

Procedures

Informed consent was obtained from all participants. Participants were interviewed individually using a semi-structured interview guide. Interviews were scheduled at a time and place convenient for the participant (e.g., at home, in the dialysis unit, or over the telephone). The use of a telephone facilitated the recruitment of participants living in rural areas and those unable to travel because of health or personal issues.

Participants were asked: how the choice of dialysis treatment was made; what changes have occurred in their lives since the decision; what their role in the decision-making process was; and what could have been done to better support them in their role. Participants were prompted, as necessary, to further explore their perspectives about values, outcomes, and other key factors that influenced the decision-making process.

Participants were also asked to complete a demographic questionnaire, the SURE tool (Légaré et al., 2010), and the Decision Regret Scale (O'Connor, 1996). The SURE Tool (Légaré et al., 2010) was chosen to evaluate participants' certainty about the dialysis modality choice and factors known to contribute to certainty (e.g., feeling knowledgeable, clear values, supported). This four-item instrument has good internal validity (Cronbach's α = 0.65) and discriminates between those who had made or did not make a choice. The Decision Regret Scale (O'Connor, 1996) was used to determine if there was regret about the selected dialysis option (Brehaut et al., 2003). The five-item scale has good internal validity (Cronbach's α = 0.81 to 0.92) and correlates with satisfaction, certainty, and overall quality of life.

Analysis

Audio-recorded interviews were transcribed verbatim. Data were coded using the research questions guiding the study through the recognition of patterns and relationships. Analysis of data occurred using a process of constant comparison in data analysis and used steps broadly described as synthesizing, theorizing, and recontextualizing. Interpretations were validated with the research team and study participants before being recontextualized within existing knowledge using the IP-SDM model (Légaré, 2010). Findings were audited by the research team. Quantitative data gathered on demographics, certainty and regret were double entered into Excel and screened for erroneous data before being analyzed descriptively.

RESULTS

Participant characteristics

Ten significant others from both rural and urban communities participated in the study (Table 1). Participants included both sexes with an age range from 42 to 71 years. The significant others were wives, husbands, and daughters of patients who had made the dialysis treatment modality decision. Dialysis treatment modalities represented were: at-home peritoneal dialysis, at-home hemodialysis, and

Table 1: Characteristics of participants	
Characteristic of participant	**N = 10**
Sex	
Male	3
Female	7
Age (years)	
41–50	2
51–60	6
61–70	1
71–80	1
Relationship	
Wife	5
Husband	3
Daughter	2
Dialysis method	
Home peritoneal dialysis	6
In-centre hemodialysis	3
Home hemodialysis	1
Work status	
Retired	1
Employed full-time	3
Employed part-time	1
Unemployed	5
Highest education	
Community college	7
High school	3
Stage of implementing dialysis	
Not implemented	4
Implemented < 1 month	2
Implemented 2–6 months	4
Decisional conflict	
Some	4
None	6
Decisional regret	
Mild	2
None	8

in-centre hemodialysis. Participants were at various stages of the treatment decision process, ranging from not yet initiated to six months into treatment. Eight participants identified the patients as the decision maker, one felt they had equally shared the decision with the patient, and one identified the patient's daughter as the decision maker. Of the ten participants, four were experiencing some decisional conflict and two were experiencing mild decisional regret.

Thematic summary

Five main themes emerged from the interviews with significant others: 1) significant other roles, 2) factors influencing the decision-making process, 3) factors influencing modality decision implementation, 4) additional environmental factors to consider, and 5) supportive interventions (Table 2).

Significant other roles

Several roles were described by participants and may be associated with specific steps during the decision-making process. These roles are: providing a positive outlook, "being with", advocating, caregiving, learning, and sharing opinions.

Table 2: Significant other roles and factors influencing modality decisions

Significant other roles
- Providing a positive outlook
- "Being with"
- Advocacy
- Caregiving
- Learning and sharing opinions

Factors influencing the decision-making process

Values and preferences of at-home treatments:
- Being home
- Taking control
- Flexibility

Values and preferences of in-centre treatments:
- Keeping home separate
- Differing responsibility of treatments
- Travel to in-centre

Factors in modality decision implementation
- Unanticipated events
- Relationship changes
- Change in recreational travel
- Worry about the individual suffering from chronic kidney disease

Additional factors to consider
- Initiating a life sustaining therapy
- Health problems of the significant other

Supportive interventions identified by participants
- Anticipatory peer support
- Assessing patient and family educational needs

The role of providing a positive outlook is defined as the conservation of an optimistic perspective: "It is not all roses, but with a crisis like this I believe you have, have to stay positive and you have, have to believe in hope." The role of "being with" was defined as the emotional, physical, psychological and spiritual presence/support provided (Hunter, 2002). One significant other described it as a general, all-encompassing role: "My part is just to support." Another shared: "Being there and listening and supporting the ideas."

The role of advocacy described by one participant: "…the nurses are great and if they are not, we tell them …I don't take any [nonsense], so I'm pretty rude at times and to the point. I like to get to the end of the problem." Another participant disclosed: "I've been really pushing for the [installation of a] life line", a reference to her perceived need for a direct line to emergency services at home.

The role identified of caregiving was described by many participants as providing help with implementation of dialysis, activities of daily living (including self-care), and instrumental activities (e.g., answering phones, housework, driving). One participant described her role in helping her husband conduct peritoneal dialysis exchanges: "I do everything for him. I get to prepare everything and he just gets to sit and hook himself up." Another participant noted that: "Some days I set up for him or I'm always taking it down and cleaning the machine after, so it's both of us that are involved."

Another role is learning together and sharing opinions. Learning together is defined as the process of acquiring knowledge to inform the patient suffering from kidney disease of the modalities available. In addition to a myriad of information sources (e.g., information booklets, videos, friends), participants often met with the dialysis modality options nurse. Three of the significant others had attended a pre-renal insufficiency clinic education program provided by the nephrology program. Finally, sharing opinions was described by one significant other: "I would give my opinion… I think we have a pretty open relationship, so we talked about it right from the start."

Factors influencing the decision-making process

Participants described having their own values and preferences related to modality options. Values and preferences described related to the choice of *at-home* treatment delivery included being home, taking control, and flexibility. Several significant others identified the importance of being home: "He was happier at home… we realized that the best thing was at home." Many significant others of patients conducting at-home treatments described the patient's feeling of importance of being in control over his/her health problem. One participant commented on feeling lack of control when in the hospital: "…and every time you go to the hospital there is some sort of delay or all these going on… at home, at least you can control it." The element of flexibility, the freedom attributed to at-home treatments was described by participants: "I think once we start doing it at night and we have our days free to do what we want… we'll have a bit more freedom."

Values and preferences described by participants as being related to an *in-centre* treatment modality placed higher value on keeping the home separate, having health professionals responsible for treatments, and travelling to an in-centre unit. Keeping the home separate was described as the experience of avoiding the intrusion of dialysis equipment into the home environment: "…I wanted to keep the dialysis separate from our home lives." Participants also described concern about the responsibility of at-home treatment execution. One participant described her mother's choice of receiving in-centre care: "She chose to have it done at the hospital. She felt safe knowing there were doctors around."

Participants also described how travel for treatment (e.g., the time, distance, and feasibility) impacted the modality decision. One participant described the impact of travel on their experience with in-centre dialysis: "If there was a snow storm… it would take us two-and-a-half hours to get to the hospital and… would take us two hours back, so that's a big chunk of time." The challenges of travelling were a common concern in participants who lived in rural communities.

Factors influencing implementing the chosen modality

Factors that influenced implementing the chosen modality were: unanticipated events, relationship changes, changes in recreational travel, and worry about the individual with chronic kidney disease. Participants described their experience with unanticipated events, the unforeseen, and unprepared events during treatment implementation: "We didn't have an idea. You have an idea, but you don't [know] about how much equipment will be coming into your home, as far as supplies." Some participants related complications (e.g., infections, catheter malfunctions) as being surprising events that impacted their ability to implement their chosen modality. Participants also described changes in interpersonal relationships or behaviours including disruptions in employment, intimacy with their partner, or the ability to see family. One participant described the need to stay at home in the evenings while her husband was performing dialysis: "I'm still having a bit of a hard time … I have to be home. Somebody has to be home."

Participants also described a perceived inability to engage in recreational travel. One participant noted: "My husband and I were doing a lot of travelling because we knew it was going to happen sooner or later. Of course it is a little more difficult now to do that travelling."

Additionally, several participants expressed concern about their significant other's health status and described a feeling of concern over the individual's safety when he/she was alone: "I worry constantly because her balance is off and I, when I'm at work, I'm afraid that she might take a fall …well, I'm constantly worrying about her…"

Additional environmental factors to consider

The environment in which the decision was being made emerged as important. Factors within the environment that influenced the decision-making process were: initiating a life-sustaining therapy and health problems of the significant other.

The significant others described their own experience with coming to terms with the patient's diagnosis of end stage renal disease and the decision to initiate RRT. The idea of initiating a life-sustaining therapy was often described as the gravity of making the decision to start dialysis: "At first he didn't want to go through it [dialysis]… I said, "You have to do it for us and you have to do it for yourself." Another factor within the environment that influenced the significant others' experience with making and implementing the decision was the impact of their personal health problems. For example, one participant said: "I had a problem myself, I had questionable lung cancer… the day they told him the kidney had failed, I was having a biopsy for my lungs."

Supportive interventions identified by participants

Two supportive interventions described were anticipatory peer support and assessing patient and family educational needs. Anticipatory peer support was described as providing guidance and support in advance of making the dialysis modality decision. Participants expressed a desire to see how other patients managed their dialysis treatments both at home and in-centre. There was also a suggestion to have ongoing evaluation of overall patient and family education needs and their perception of information provided by the interprofessional team. For example, one participant described the anxiety of beginning at-home dialysis treatments when she said: "I'm worried we've missed some information."

DISCUSSION

This is the first known study to explore the role of the significant other in the dialysis modality decision-making process. In summary, significant others play an important role in making and implementing the decision, as well as supporting the patient in the process of decision making. This study also validated the elements within the IP-SDM model (Légaré et al., 2011) and, in particular, highlighted the importance of exploring feasibility of options with significant others.

Significant others experienced several unanticipated events during modality decision implementation. One clear example was the travel requirements of the patient's chosen modality. The participant's misperception about the need to travel to access treatment in these situations was founded in either inaccurate information or inaccurate expectations of the chosen modality. Other examples of unanticipated events expressed by participants were: not being aware of the amount of equipment needed to store in the home to perform dialysis treatments; the amount of time required to implement peritoneal exchanges during the day; and adverse events that impacted the patient's ability to perform their chosen treatment (e.g., peritonitis). It is important to address these inaccurate perceptions and expectations, as they may lead directly to decisional conflict, a state associated with individuals changing their mind, regret, lack of knowledge, and blame for bad outcomes (Sun, 2004; Gattellari & Ward, 2005). Decisional conflict may be reduced through tailoring information for individuals and their significant others, and the realignment of treatment expectations (Gattellari & Ward, 2005).

Interestingly, significant others often were experiencing their own health issues or emotional concerns during this process. Given that the majority of the current dialysis population is over the age of 65 (Canadian Institute of Health Information, 2010) and there is a prevalence of chronic disease in this age cohort (Broemeling, Watson, & Prebtani, 2008), health issues of the significant other are likely to continue to be an important factor to assess in the modality decision-making process. Significant others who are experiencing their own health issues (e.g., potential cancer diagnosis, degenerative eye disease) may need additional support from the health care team in exploring the feasibility of different modalities. In addition to physical illness, significant others may also have their own emotional response to the patient's diagnosis and need for RRT. The concurrent experience of these emotional factors and physical well-being should be considered when providing quality and timely decision support.

Significant others perform a variety of caregiver roles and their ability to provide effective supportive care, especially in light of their own physical and emotional needs, may, in fact, influence modality implementation. In fact, up to 33% of dialysis caregivers have been shown to be symptomatic of depression, and quality of life may be significantly affected, especially when caring for elderly patients receiving peritoneal dialysis (Belasco, Barbosa, Bettencourt, Diccini, & Sesso, 2006). Schneider (2004) further supports the impact on these individuals and found that dialysis caregivers were physically and mentally fatigued. In this study, many of the participants had key roles in the implementation of the treatment modality, particularly with at-home treatments. Even participants who identified patients as being independent with managing their illness and treatment procedures were still involved in many caregiver activities, functional and instrumental. This study found the significant others' physical and psychological well-being may need to be part of the feasibility assessment if, for example, they are involved in the execution of dialysis (e.g., ability to carry equipment in at-home settings) or they are an integral part of in-centre treatments (e.g., ability to provide transportation to in-centre treatments).

This study provided validation for the IP-SDM model and further justified elements within the model (Légaré et al., 2011). Similar to other decision-making situations, significant others in this study sought out information (e.g., on the internet, attended group sessions), exchanged information with the patient, and shared their preferred option. They also described having shared the emotional and affective aspects in the decision-making situation. Feasibility of the modality choice was another important element of the decision-making process, particularly from the significant others' perspective. Participants spoke of their various roles with implementing the treatment decision and unexpected events they had to cope with in their role. Previous research has found that caregivers who feel they had no

choice in their role were more likely to experience negative effects of caregiving (Bouldin, Winter, & Andresen, 2005). Supporting the need for open communication in regards to potential role changes may be important in addressing feelings of dependence on family members felt by some dialysis patients (O'Connor et al., 2011) and the feelings of burden that are implicated in choosing a palliative management pathway (Morton et al., 2010). Interventions suggested by participants (e.g., peer support, educational needs assessment) also reinforced these as key elements in the IP-SDM model when significant others are involved in the modality decision. Using the IP-SDM model (Légaré et al., 2011) as a guide, the interprofessional team could assess the educational needs of both the patient and significant other, discuss affective/emotional aspects during the step of information exchange, and consider the general health of the significant other when determining feasibility of options.

There are study limitations and strengths to consider. First, themes may have been categorized differently had we not used the IP-SDM (Légaré et al., 2011) model in the study. However, the use of this model helped to target questions, and used participant time in a thoughtful manner, which Thorne (2008) describes as providing scaffolding for the study. Another potential limitation was the use of the telephone for interviews. However, it did allow for a more inclusive geographic distribution of participants. Ensuring a range of participant perspectives, auditing by the research team, and member checking were used to enhance credibility of study findings.

Table 3: Support for the significant other in an interprofessional shared decision-making approach

IP-SDM decision-making concepts*	Practice implications	Supporting themes from study
Role of the significant other	Determine patient's wishes for significant other and patient's expectations of their level of involvement in decision-making process Include the informal assessment of the significant other's well-being as it relates to the treatment modality decision	Choosing life Unanticipated life change Health problems of significant other
Exchange of information	Assess learning needs of significant other as well as patient Tailor teaching and learning to individuals involved in decision-making process Verify accuracy and realign expectations of treatment options and related practical considerations Encourage communication of affective/emotional factors	Assessing patient and family educational needs Learning together Unanticipated events Recreational travel
Clarification of values/ preferences	Encourage significant other to express their values for outcomes and features of option Explore and address concerns of patient when possible	Differing responsibility of treatments Taking control Flexibility Keeping home separate Being home
Feasibility of the options	Explore feasibility of options with patient, significant other and health care team Determine needs of patient and involvement of significant other in treatment execution	Travel to in-centre Unanticipated events Caregiver role
Preferred choice	Encourage sharing preferences between patient and significant other	Sharing opinions
Implementation of the chosen option	Provide tangible support and referrals where needed Monitor implementation issues of the significant other and patient	Recreational travel Relationship changes Unanticipated events Caregiver role Worry about the individual suffering from chronic kidney disease

**Based on the IP- SDM Model (Légaré et al., 2011)*

CONCLUSION AND PRACTICE IMPLICATIONS

Although the patient is central to the dialysis modality decision, these complex health care decisions are influenced or impacted by the patient's significant other. This study furthers our knowledge of the important roles of significant others during this process and highlights the factors influencing their participation in the decision-making process. Findings support the need for health care providers to recognize the potential of emotional and physical factors experienced by the significant other to affect making and implementing the treatment modality decision by patients with chronic kidney disease. Significant others may be an important influence in addressing the feasibility and outcomes of a patient's treatment modality option.

There are several implications for nursing practice that should be considered during the shared decision-making process (see Table 3). If the patient agrees, significant others should be included in assessing the learning needs, exchanging information with and in the sharing of opinions with information tailored to suit the needs of both the significant other and the dialysis patient. To reduce unanticipated events, information acquired by the significant other needs to be assessed for accuracy, and perceived expectations can then be realigned accordingly. Without a doubt, nurses need to include the significant other in modality deliberation about which approach and where; it may lead to improved patient and significant other outcomes.

REFERENCES

Belasco, A., Barbosa, C., Bettencourt, A., Diccini, A., & Sesso, R. (2006). Quality of life of family caregivers of elderly patients on hemodialysis and peritoneal dialysis. *American Journal of Kidney Diseases, 48,* 955–963.

Bouldin, E., Winter, K., & Andresen, E. (2005). Lack of choice in caregiving decision and caregiver risk of stress, North Carolina. *Preventing Chronic Disease: Public health research, practice, and policy, 7,* 1–11.

Brehaut, J., O'Connor, A., Wood, T., Hack, T., Smirnoff, L., Gordon, E., & Feldman-Stewart, D. (2003). Validation of a decision regret scale. *Medical Decision Making, 23*(4), 281–292.

Broemeling, A.-M., Watson, D., Prebtani, F., & Health Outcomes Steering Committee of the Health Council of Canada. (2008). Population patterns of chronic health conditions, co-morbidity and healthcare use in Canada: Implications for policy and practice. *Healthcare Quarterly, 11*(3), 70–76.

Canadian Institute of Health Information. (2010). *The treatment of end stage organ failure in Canada: 1998–2008—CORR 2010 Annual Report.* Ottawa, ON: CIHI.

Carey, H., Finkelstein, S., Santacroce, S., Brennan, N., Raffone, D., & Rifkin, J. (1990). The impact of psychosocial factors and age on CAPD dropout. *Advances in Peritoneal Dialysis, 6,* 26–29.

Entwistle, V., & Watt, I. (2006). Patient involvement in treatment decision-making: The case for a broader conceptual framework. *Patient Education and Counseling,* 1–11. doi:10.1016/.pec.2006.05.002

Gattellari, M., & Ward, J. (2005). Men's reactions to disclosed and undisclosed opportunistic PSA screening for prostate cancer. *Medical Journal of Australia, 182,* 386–389.

Hunter, L. (2002). Being with woman: a guiding concept for laboring women. *JOGNN, 31,* 650–657.

Kara, B., Caglar, K., & Kilic, S. (2007). Nonadherence with diet and fluid restrictions and perceived social support in patients receiving hemodialysis. *Journal of Nursing Scholarship, 39*(3), 243–248.

Légaré, F., Kearing, S., Clay, K., Gagnon, S., D'Amours, D., Rousseau, M., & O'Connor, A. (2010). Are you SURE? Assessing patient decisional conflict with a 4-item screening test. *Canadian Family Physician, 56,* e308–314.

Légaré, F., Stacey, D., Briere, N., Desroches, S., Dumont, S., Fraser, K., … Aude, D. (2011). A conceptual framework for interprofessional shared decision making in home care: Protocol for a feasibility study. *BMC Health Services Research, 11*(1), 23.

Morton, R., Devitt, J., Howard, K., Anderson, K., Snelling, P., & Cass, A. (2010). Patient views about treatment of stage 5 CKD: A qualitative analysis of semistructued interviews. *American Journal of Kidney Diseases, 55*(3), 431–440.

Murray, M., Brunier, G., Chung, J., Craig, L., Mills, C., Thomas, A., & Stacey, D. (2009). A systematic review of factors influencing decision-making in adults living with chronic kidney disease. *Patient education and counseling, 76,* 149–458.

O'Connor, A. (1996). *Decision Regret Scale* [User Manual]. Retrieved from Ottawa Hospital Research Institute website http://decisionaid.ohri.ca///_Manuals/_Regret_Scale.pdf

O'Connor, A., Bennett, C., Stacey, D., Barry, M., Col, NF., Eden, K., … Rovner, D. (2011). Decision aids for people facing health treatment or screening decisions (Review). *The Cochrane Collaboration, 229,* 3, 1–113.

Plantinga, L.C., Fink, N.E., Harrington-Levey, R., Finkelstein, F.O., Hebah, N., Powe, N., & Jaar, B. (2010). Association of social support with outcomes in incident dialysis patients. *Clinical Journal of the American Society of Nephrology, 5,* 1480–1488.

Schneider, R. (2004). Chronic renal failure: Assessing the Fatigue Severity Scale for use among caregivers. *Journal of Clinical Nursing, 13,* 219–225.

Stiggelbout, A., Jansen, S., Otten, W., Baas-Thijssen, M., van Slooten, H., & van de Velde, C. (2007). How important is the opinion of significant others to cancer patients' adjuvant chemotherapy decision-making? *Supportive Care Cancer, 15,* 319–325.

Sun, Q. (2004). *Predicting Downstream Effects of High Decisional Conflict: Meta-analysis of the Decisional Conflict Scale* (Unpublished master's thesis). University of Ottawa, Ottawa, Ontario.

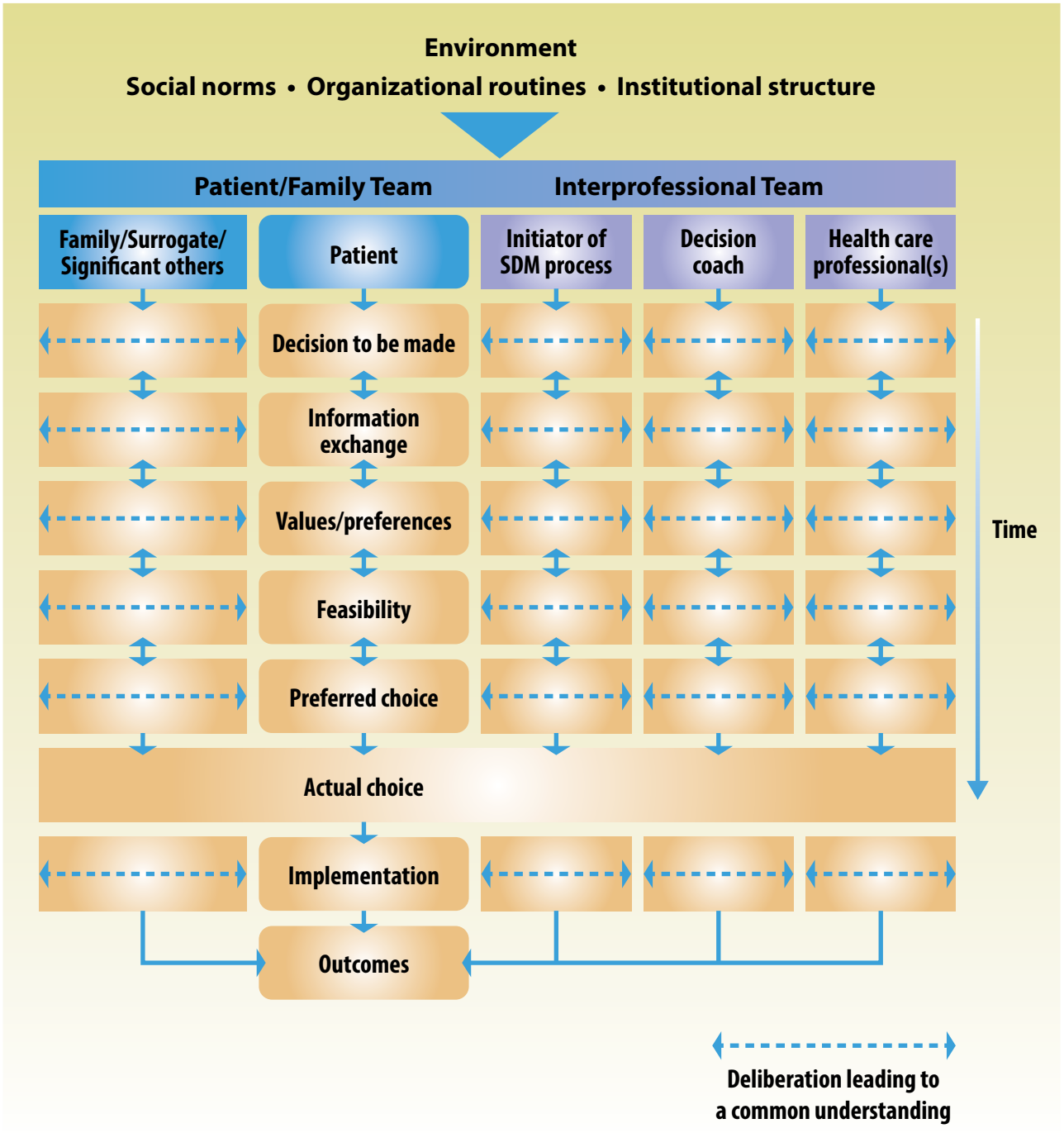
Suri, R., Larive, B., Garg, A., Hall, Y., Pierratos, A., Chertow, G., … Kliger, A. (2011). Burden on caregivers as perceived by hemodialysis patients in the Frequent Hemodialysis Network (FHN) trials. *Nephrology Dialysis Transplant.* doi:10.1093//

Thorne, S. (2008). Interpretive Description. Walnut Creek, CA: Left Coast Press.

Tong, A., Sainsbury, P., Carter, S., Hall, B., Harris, D., Walker, R., … Craig, J. (2008). Patients' priorities for health research: Focus group study of patients with chronic kidney disease. *Nephrology Dialysis Transplant, 23,* 3206–3214.

Untas, A., Thumma, A., Rascle, N., Rayner, H., Mapes, D., Lopes, A., … Combe, C. (2010). The associations of social support and other psychosocial factors with mortality and quality of life in the dialysis outcomes and practice patterns study. *Clinical Journal of the American Society of Nephrology, 6,* 142–152.

Wuerth, D., Finkelstein, S., Schwetz, O., Carey, H., Kliger, A., & Finkelstein, F. (2002). Patients' descriptions of specific factors leading to modality selection of chronic peritoneal dialysis or hemodialysis. *Peritoneal Dialysis International, 22*(2), 184–190.



APPENDIX A: The Inter-professional Shared Decision Making Model (Légaré et al., 2011)
Copyright 2011. Used with Permission.

CONTACT HOUR: 2.0 HRS

An update on vancomycin dosing and monitoring practices in hemodialysis patients

Maria Zhang, Linda Dresser, and Marisa Battistella

OBJECTIVES

After reading this article, readers should be able to:

1. Describe common indications for vancomycin therapy in hemodialysis patients
2. Explain the importance of therapeutic drug monitoring using vancomycin serum concentrations
3. Identify target trough serum drug concentrations
4. Compare and contrast different vancomycin dosing protocols in hemodialysis patients
5. Describe the ability of different dosing protocols to achieve target trough serum concentrations

Maria Y. Zhang, PharmD, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, ON

Linda Dresser, PharmD, Assistant Professor, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto ON Clinical Pharmacist—University Health Network, Toronto, ON

Marisa Battistella, BScPhm, PharmD, ACPR Clinician Scientist, Assistant Professor, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto ON Clinical Pharmacist—Nephrology, University Health Network, Toronto, ON

Address correspondence to: Marisa Battistella, BScPhm, PharmD, ACPR, Clinical Pharmacist—Nephrology, University Health Network, 200 Elizabeth Street, EB 214 Toronto, ON, M5G 2C4

Email: ***marisa.battistella@uhn.ca***

BACKGROUND

Infection is the second leading cause of death in hemodialysis (HD) patients (Lafrance, Rahme, Lelorier, & Iqbal, 2008; Vandecasteele, Boelaert, & De Vriese, 2009). In this population, infection accounts for 12% to 36% of mortality, with the main cause being vascular access-related septicemia (Lafrance et al., 2008; Vandecasteele et al., 2009). Gram-positive organisms cause 58% to 99% of tunnelled catheter-related bloodstream infections and 70% to 93% of arteriovenous fistula or graft-related bloodstream infections in HD patients (Lafrance et al., 2008).

According to the Canadian Antimicrobial Resistance Alliance (2011), *Staphylococcus aureus* and coagulase negative *Staphylococci* (CONS) cause approximately 15% and 12% of all bacteremias in Ontario, respectively. In hemodialysis patients, *S. aureus* is the single leading pathogen as it causes 27%–39% of all bacteremias, which are complicated in almost half of cases (Lafrance et al., 2008; Vandecasteele et al., 2009). Furthermore, HD patients have a 100-fold higher risk for invasive methicillin-resistant *S. aureus* (MRSA) infections than the general population (45.2/1,000 versus 0.2–0.4/1,000 in USA in 2005). In Canada, Williams and Simor (2012) found that the MRSA rate in hemodialysis outpatients is approximately 0.58/10,000 patient days.

Vancomycin is a glycopeptide antibiotic used for complicated and drug-resistant gram-positive infections (Launay-Vacher, Izzedine, Mercadal, & Deray, 2002). It works by inhibiting cell wall synthesis of gram-positive bacteria (Vandecasteele et al., 2009). Vancomycin is poorly metabolized and is mainly excreted unchanged in urine, thus there is decreased renal clearance in those with renal failure. Non-renal clearance of vancomycin

may account for up to 30% of its total body clearance and also decreases in terminal renal insufficiency, possibly due to inhibition of vancomycin metabolism by uremic toxins (Launay-Vacher et al., 2002).

It is important to note that in hemodialysis patients vancomycin has a low volume of distribution, low protein-bound fraction, and low molecular weight, thus easily diffusing through dialysis membranes (Launay-Vacher et al., 2002). It is significantly dialyzable when hemodialysis is performed using a high-flux membrane such as polysulfone, polyacrylonitrile and poly-methlmethacrylate.

MONITORING SERUM VANCOMYCIN CONCENTRATIONS

Trough serum vancomycin concentrations are the most accurate and practical method for monitoring vancomycin effectiveness, as it can be used as a surrogate marker for Area Under the Curve (AUC). It would be impractical to collect the multiple serum vancomycin concentrations required to determine the AUC, which is needed to determine overall vancomycin exposure (Rybak et al., 2009).

It is recommended to collect serum vancomycin concentrations just prior to dialysis. A rebound in vancomycin concentrations at the end of a dialysis session is frequently observed. This may be due to recirculation from plasma protein binding sites (Launay-Vacher et al., 2002). In Pollard et al.'s study (1994), serum vancomycin concentrations decreased to 67% of pre-HD concentrations during a high-flux hemodialysis session and eventually increased to 87% of pre-HD concentrations in the post-dialysis redistribution phase. This phase averaged six hours, but ranged from one to 12 hours. The clinical significance of this rebound phenomenon is yet to be determined. In addition, while it may be most accurate to measure serum vancomycin levels at least one to two hours after dialysis, this may not be practical.

The 2009 consensus review by the Infectious Diseases Society of America (IDSA) and the American Society of Health-System Pharmacists (ASHP) on therapeutic monitoring of vancomycin in adults recommends maintenance of minimum serum vancomycin trough concentrations above 10 mg/L to avoid the development of vancomycin-intermediate *Staphylococcus Aureus* (VISA) in the treatment of *S. aureus* infections. For complicated infections including bacteremia, endocarditis, osteomyelitis, meningitis, and hospital-acquired pneumonia (HAP) caused by *S. aureus*, vancomycin serum trough concentrations of 15 mg/L–20 mg/L are recommended. These targets were selected to potentially improve penetration in the tissues, to increase the probability of obtaining optimal target serum concentrations, and to improve clinical outcomes (Rybak et al., 2009).

DOSING RECOMMENDATIONS

Usual dosing practices of vancomycin in patients undergoing high-flux hemodialysis are similar to administering a loading dose (LD) of 1,000 mg followed by maintenance doses of (MD) 500 mg during or after the last hour of each hemodialysis session. Recent literature has consistently shown that vancomycin trough concentration targets of 15 mg/L–20 mg/L are not obtained in the majority of hemodialysis patients with the current dosing practices (Vandecasteele & De Vriese, 2010).

In Barth and DeVincenzo's dose comparison report (1996), an LD of 1,000 mg followed by an MD of 500 mg after each HD session resulted in 42.7% of patients who did not achieve the target of 15 mg/L. However, 60.6% of patients did have trough concentrations between 10 mg/L–20 mg/L. With the same dosing regimen, but given intradialytically during the last hour of dialysis, Ariano, Fine, Sitar, Rexrode, and Zelenitsky (2005) showed that approximately 60% of patients achieved vancomycin trough concentrations between 10 mg/L–20 mg/L, but only 12% reached 15 mg/L or above.

In Crawford, Largen, Walton, and Doran's prospective, 20-week study (2008), a single dose of vancomycin 35 mg/kg was administered to nine patients receiving outpatient dialysis three times per week through a high-flux synthetic dialyzer. The dose was administered either pre or post dialyzer. The group proposed that once-weekly dosing protocols might minimize medication errors and burden on patients and staff while eliminating the need to monitor for serum vancomycin concentrations. However, with this regimen, no patient achieved the primary outcome of achieving a pre-dialysis serum concentration of 10 mg/L or more on study day eight. Mean day eight pre-dialysis serum vancomycin concentrations (ranges) were 3.7 mg/L (3.5 mg/L–5 mg/L) after pre-dialyzer administration and 6.4 mg/L (3.5 mg/L–8.2 mg/L) after post-dialyzer administration of vancomycin. Therefore, this type of dosing may not achieve ideal vancomycin concentrations to treat infections in HD patients.

Emerging evidence suggests that weight-related loading doses, with fixed or weight-related maintenance doses, are more efficacious at achieving target serum trough concentrations. In Zelenitsky, Ariano, McCrae, and Vercaigne's study (2012), using kinetic modelling, a new initial vancomycin dosing protocol (Table 1 (page 27)) was developed and then prospectively validated. Specifically, they evaluated the ability for this protocol to achieve pre-hemodialysis trough concentrations of 10 mg/L–20mg/L, with an optimal target of 15 mg/L–20mg/L in hemodialysis patients. Two pre-hemodialysis blood samples were requested for 29 patients. One was collected prior to session #2 (post-load trough) and another after two maintenance doses or prior to hemodialysis session #4, 5 or 6 (maintenance trough). Of the post-load troughs, 76.9% were collected after 48 hours. All of the maintenance troughs were collected after

48-hour inter-dialytic periods with 41.4% being collected after 72-hour inter-dialytic periods. The group found that 65.5% of patients were able to achieve maintenance trough concentrations of 10 mg/L–20 mg/L including 37.9% who achieved 15 mg/L–20 mg/L.

The group had other findings of note: (1) pharmacokinetic simulations showed no improvement in target attainment with weight-based (mg/kg) dosing, as compared to a dosing algorithm using body weight thresholds; (2) vancomycin therapeutic drug monitoring is valuable in guiding the need for subsequent dose modifications to achieve targets; and (3) conventional vancomycin therapy is no longer sufficient for treating serious *S. aureus* infections, as the trough concentrations obtained are suboptimal.

Table 1: Threshold weight based nomogram (Zelenitsky et al., 2012)

Actual Body Weight	LD	MD
< 70 kg	1,000 mg	500 mg
70 kg–100 kg	1,250 mg	750 mg
> 100 kg	1,500 mg	1,000 mg

Similar results were found in a study done by Taylor and Allon (2010), where 34 hospitalized hemodialysis patients received LD of 20 mg/kg followed by MD of 1,000 mg during the last hour of treatment. The trough vancomycin concentration was measured after the third dose of vancomycin and immediately before the fourth dialysis session. Mean trough serum concentrations were 19.0mg/L (95% CI: 16.7–21.3). Twelve patients (35%) had trough vancomycin concentrations of 15 mg/L–20 mg/L and 27 (79%) had concentrations of 10 mg/L–25 mg/L. Two patients had trough vancomycin concentrations of <10 mg/L and five patients had concentrations > 25 mg/L.

CONCLUSION

In summary, current vancomycin dosing protocols involving fixed doses of 1,000 mg LD followed by 500 mg MD with each dialysis session are unable to consistently meet target trough concentrations of 10 mg/L to 20 mg/L. Emerging evidence for weight-related dosing protocols (either based on mg/kg or by thresholds) demonstrates that these are more likely to achieve target vancomycin serum trough concentrations.

REFERENCES

Ariano, R.E., Fine, A., Sitar, D.S., Rexrode, S., & Zelenitsky, S.A. (2005). Adequacy of a vancomycin dosing regimen in patients receiving high-flux hemodialysis. *American Journal of Kidney Diseases, 46,* 681–687.

Barth, R.H., & DeVincenzo, N. (1996). Use of vancomycin in high-flux hemodialysis: Experience with 130 courses of therapy. *Kidney International, 50,* 929–936.

Canadian Antimicrobial Resistance Alliance. (2011). *CANWARD 2011 Pathogens: Ontario data from blood specimens.* Retrieved from http://www.can-r.com/study.php?study=canw201

Crawford, B.S., Largen, R.F., Walton, T., & Doran, J.J. (2008). Once-weekly vancomycin for patients receiving high-flux hemodialysis. *American Journal of Health-System Pharmacy, 65*(13), 1248–1253.

Lafrance, J.P., Rahme, E., Lelorier, J., & Iqbal, S. (2008). Vascular access-related infections: Definitions, incidence rates, and risk factors. *American Journal of Kidney Diseases, 52*, 982–993.

Launay-Vacher, V., Izzedine, H., Mercadal, L., & Deray, G. (2002) Clinical review: Use of vancomycin in haemodialysis patients. *Critical Care, 6*(4), 313–316.

Pollard, T.A., Lampasona, V., Akkerman, S., Tom, K., Hooks, M.A., Mullins, R.E., & Maroni, B.J. (1994). Vancomycin redistribution: Dosing recommendations following high-flux hemodialysis. *Kidney International, 45,* 232–237.

Rybak, M., Lomaestro, B., Rotschafer, J.C. Moellering, R., Craig, W., Billeter, M., … Levine, D.P. (2009). Therapeutic monitoring of vancomycin in adult patients: A consensus review of the American Society of Health-System Pharmacists, the Infectious Diseases Society of America, and the Society of Infectious Diseases Pharmacists. *American Journal of Health-System Pharmacy, 66*, 82–98.

Taylor, M.E., & Allon, M. (2010). Practical vancomycin dosing in hemodialysis patients in the era of emerging resistance: A single-centre experience. *American Journal of Kidney Diseases, 55*(6), 1163–5.

Vandecasteele, S.J., & De Vriese, S. (2010). Recent changes in vancomycin use in renal failure. *Kidney International, 77*, 760–764.

Vandecasteele, S.J., Boelaert, J.R., & De Vriese, A.S. (2009). Staphylococcus aureus infections in hemodialysis: What a nephrologist should know. *Clinical Journal of the American Society of Nephrology, 4*, 1388–1400.

Williams, V., & Simor, A.E. (2012). Colonization and infection with methicillin-resistant staphylococcus aureus (MRSA) in patients at a Canadian outpatient hemodialysis centre. Poster session presented at ID Week 2012, San Francisco, CA.

Zelenitsky, S.A., Ariano, R.E., McCrae, M.L., & Vercaigne, L.M. (2012). An INITIAL vancomycin dosing protocol to achieve therapeutic serum concentrations in hemodialysis patients. *Clinical Infectious Diseases, 55*(4), 527–33.

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

An update on vancomycin dosing and monitoring practices in hemodialysis patients

Maria Zhang, Linda Dresser, and Marisa Battistella

1. Approximately what proportion of deaths in hemodialysis patients are caused by infections?
   a) 5%
   b) 10%
   c) 25%
   d) 50%

2. Vancomycin works by:
   a) interfering with bacterial folic acid synthesis
   b) binding to bacterial cell wall, resulting in cell death
   c) inhibiting protein synthesis at the level of ribosomes
   d) inhibiting bacterial DNA gyrase

3. What is the role of intravenous vancomycin in hemodialysis patients?
   a) prophylaxis against gram-negative bacteria found on the skin of patients and health care providers
   b) treatment of systemic infections caused by gram-negative bacteria
   c) prophylaxis against gram-positive bacteria found on the skin of patients and health care providers
   d) treatment of systemic infections caused by gram-positive bacteria

4. Which of the following are indications for intravenous vancomycin therapy?
   a) coagulase-negative Staphylococci
   b) methicillin-sensitive Staphylococcus aureus (MSSA)
   c) Clostridium difficile
   d) Escherichia coli

5. By targeting a minimum trough serum concentration of 10 mg/L with an optimal trough concentration of 15 mg/L–20 mg/L, clinicians aim to?
   a) decrease resistance
   b) improve clinical outcomes
   c) increase penetration
   d) all of the above

6. When should vancomycin trough serum concentrations be collected?
   a) immediately post-dialysis
   b) immediately pre-dialysis
   c) intradialytically, before vancomycin is given
   d) minimum of 120 minutes post-dialysis

7. How likely are current dosing regimens able to achieve optimal vancomycin pre-dialysis serum trough levels of 15 mg/L or above? Assume a dosing regimen of LD 1,000 mg followed by MD of 500 mg with each dialysis session, given intradialytically during the last hour.
   a) 5%
   b) 10%–15%
   c) 25%
   d) 45%

8. According to 2009 IDSA-ASHP Guidelines, in which of the following diseases would the target vancomycin trough serum concentration be 15 mg/L–20 mg/L?
   a) endocarditis caused by S. aureus
   b) osteomyelitis caused by S. aureus
   c) pneumonia caused by MRSA
   d) all of the above

9. Which of the following vancomycin dosing regimens is most likely to achieve target trough concentrations in a 75 kg male?
   a) 1,000 mg LD, followed by 500 mg MD
   b) 35 mg/kg LD, followed by 25 mg/kg MD
   c) 1,250 mg LD, followed by 750 mg MD
   d) 25 mg/kg LD, followed by 1,000 mg MD

10. Which of the following factor(s) can affect vancomycin serum trough levels?
    a) type of dialyzer membrane used
    b) dialysate flow rate
    c) blood flow rate
    d) all of the above

CONTINUING EDUCATION STUDY ANSWER FORM

CE: 2.0 HRS CONTINUING EDUCATION

An update on vancomycin dosing and monitoring practices in hemodialysis patients

Volume 23, Number 4

Maria Zhang, Linda Dresser, and Marisa Battistella

Post-test instructions:

- Select the best answer and circle the appropriate letter on the answer grid below.
- Complete the evaluation.
- Send only this answer form (or a photocopy) to:
  CANNT National Office,
  P.O. Box 10, 59 Millmanor Place,
  Delaware, ON N0L 1E0
  or submit online to **www.cannt.ca**
- Enclose a cheque or money order payable to CANNT.
- Post-tests must be postmarked by December 31, 2015.
- If you receive a passing score of 80% or better, a certificate for 2.0 contact hours will be awarded by CANNT.
- Please allow six to eight weeks for processing. You may submit multiple answer forms in one mailing, however, you may not receive all certificates at one time.

CANNT member – $12 + HST ($13.56); Non-member – $15 + HST ($16.95)

POST-TEST ANSWER GRID

Please circle your answer choice:

1.	a	b	c	d
2.	a	b	c	d
3.	a	b	c	d
4.	a	b	c	d
5.	a	b	c	d
6.	a	b	c	d
7.	a	b	c	d
8.	a	b	c	d
9.	a	b	c	d
10.	a	b	c	d

EVALUATION

	Strongly disagree				Strongly agree
1. The offering met the stated objectives.	1	2	3	4	5
2. The content was related to the objectives.	1	2	3	4	5
3. This study format was effective for the content.	1	2	3	4	5
4. Minutes required to read and complete:	50	75	100	125	150

Comments: _____

_____

_____

_____

COMPLETE THE FOLLOWING:

Name: _____

Address: _____

_____

CANNT member? ❑ Yes ❑ No Expiration date of card _____

The challenges presented by the non-compliant patient

Dr. Gavril Hercz, MD, and Dr. Marta Novak, MD

QUESTION

Dear Drs. Hercz and Novak,

How do you deal with the emotions that working with non-compliant patients causes? You know—that patient who ends up compromising their treatments because people are so angry and frustrated with them for being non-compliant that they don't get the benefit of our expertise or empathy?

Saskatoon, SK

RESPONSE

Thank you for this question. This is a very important issue that you raise. We are often faced with this scenario in clinical care. It is also insightful to realize that these patients may be dealt with differently, even though we may be well intentioned in trying to provide the same type of care, irrespective of how we are received or treated by our patients. As a starting point, we believe it is helpful to begin to examine our own reactions, e.g., why we feel angry at these types of patients? Upon recognizing that we are treating a patient who may be "non-compliant", we need to focus on our own feelings and thoughts. In taking that survey, we may notice small changes in our response—either what we may deem as a negative response, or not our optimum response. Similarly, at times, we may overcompensate, and may even be more caring than we would normally be with these patients. Seeing ourselves—having some awareness of our "usual pattern" of care—will help us use that situation as a compass to alert us to the reasons we may be changing our practice pattern with a specific patient, and will help us readjust our approach.

Once we have gained that awareness, it will allow us to provide optimum care "despite" the patients' self-protective behaviour. Moreover, it will assist us in naming the phenomenon, and then communicating that issue to the rest of the health care team. The more we are able to identify and name these phenomena, the less we are likely to "act out" on or show our frustrations to the patient. When we face a "difficult" patient, it is always helpful to think of them as a "patient with difficulty" and it might prompt us to be interested in a genuine way, as to why this individual has difficulties at this given time. Once we are interested and express this interest to the patient, it helps us to engage with them and to understand how we can assist them to achieve their goals of care in a collaborative partnership (instead of through the more commonly seen compliance model, which reflects a paternalistic mode of care).

Finally, it might be also helpful to think of non-compliant behaviour as a *failure to cope* with the demands of living life with a life-threatening, chronic, extremely intrusive illness and its treatment (dialysis).

Meet the 2013 CANNT Bursary, Award, and Research Grant Winners

SPONSORED BY FRESENIUS MEDICAL CARE

L. DAWN POWER, RECIPIENT OF THE FRANCES BOUTILIER BURSARY (BACCALAUREATE LEVEL)

By L. Dawn Power, RN, BN, CNeph(C), Edmonton, AB

Dawn grew up in the beautiful province of Newfoundland and Labrador and lived just outside the capital of St. John's in a city called Mount Pearl. She attended Memorial University of Newfoundland for two years majoring in history in the anticipation of being a high school teacher. However, after much pondering and thought, she changed her focus of education and applied to one of the hospital-based nursing schools in St. John's in the hopes of becoming a registered nurse. Accepted into The General Hospital School of Nursing, Dawn graduated as a registered nurse in 1992, where her passion for nephrology was fostered while working on a medicine floor at the Health Sciences Centre, St. John's, caring for pulmonary, GI, and nephrology patients. After six years, she moved to the province of Alberta and commenced work at the University of Alberta Hospital in Edmonton on an inpatient nephrology unit. In 2001, she became the Clinical Supervisor of the unit and then the Unit Manager in 2004. In 2012, she transitioned into the role of Renal Transplant Coordinator. In this role, Dawn cares for and monitors the health of more than 250 renal transplant patients. Throughout this journey, Dawn has maintained her CANNT membership and her CNeph(C) certification, and works with the Canadian Nurses Association as a member of the Nephrology Exam Development Committee. Five years ago, Dawn returned to school and in May 2013 she graduated from Memorial University of Newfoundland with a Bachelor of Nursing Degree.

Dawn is also the proud mother of her 10-year-old son Griffin and the concierge of two fat, needy cats. Dawn would like to graciously thank CANNT President Colleen Wile and the committee for awarding her the CANNT 2013 Francis Boutilier Bursary.

ROSALEEN NEMEC, RECIPIENT OF THE FRANCA TANTALO BURSARY (GRADUATE LEVEL)

By Rosaleen Nemec, RN, BScN, CNeph(C), Toronto, ON

I would like to thank the committee for selecting me as the recipient of the 2013 Franca Tantalo Graduate Bursary. I am honoured to accept this award. I am currently enrolled at Central Michigan University (CMU) in the Master of Arts Degree in Education program. I started my education at the University of Windsor and graduated with my BScN. Shortly after graduation, I moved to England and began my career in pediatric nursing. I returned home to Canada in 1999, and began my career at SickKids Hospital in Toronto. I worked for three years in hematology and oncology and earned my Pediatric Certificate from Ryerson University, before moving to the pediatric dialysis/apheresis unit. I was very unfamiliar with this patient population and equipment. However, it was a new challenge I was ready and willing to conquer. I started to grow, as a nurse in this area, and decided to educate myself further and enrolled in the nephrology course at Humber College. I graduated from the program in 2009 and became CNeph certified in 2011. My passion in this area has grown over the last 10 years and continues to grow. My knowledge has led me to new ventures with Sick Kids International, working on curriculum development in pediatric nephrology in Doha, Qatar. I have been fortunate enough to be able to deliver the curriculum and evaluate the impact it has had on nursing in another country. I enjoyed the teaching component of this project and working with the students. My knowledge, experiences and passion for the pediatric nephrology population has led me to working on my master's at CMU. My focus for my thesis will be examining if educational supplementation in an acute care setting will improve the quality of life for pediatric chronically ill patients who have frequent admissions to hospital. I have been a strong advocate for dialysis patients to continue their studies and to receive educational support while undergoing their dialysis. This is an area in which little research has been published, but will have great importance for an ever-growing population.

Once again, I would like to thank CANNT for their support in helping me to achieve my educational goals.

OLUSEGUN FAMURE, RECIPIENT OF THE CANNT 2013 RESEARCH GRANT

Biography not available

LONNIE BALDWIN, RECIPIENT OF THE AWARD OF EXCELLENCE, EDUCATION

Biography not available

DIANE WATSON, RECIPIENT OF THE AWARD OF EXCELLENCE, CLINICAL PRACTICE

Biography not available

KATHALEEN BIJMAN, RECIPIENT OF THE AWARD OF EXCELLENCE, ADMINISTRATION/LEADERSHIP

By Kathaleen Bijman, RN, BScN, CNeph(C), Ottawa, ON

Kathaleen graduated in 1975 from Toronto East General Hospital. She obtained her CNeph(C) designation in I995 and in 1999 she received her BScN from the University of Ottawa. Over the last 38 years she has had a variety of positions including ICU, infection control and nephrology. She has worked in nephrology for the past 30 years, and has been a CANNT member for 26 years. She was on the registration committee for the Ottawa Symposium 2000, acted as CANNT Regional VP 2000 to 2002, and was a member of the planning committee for CANNT 2012. She has held roles as a nephrology staff nurse, liaison nurse, educator, clinical application specialist and, for the past 11 years, has been the manager for the Ottawa Carleton and Eastern Ontario Dialysis Clinics (Independent Health Facilities). Under her leadership and commitment, the clinics are the first Independent Health Facilities in Canada to achieve "Accreditation" by Accreditation Canada. Kathaleen's goal has always been to ensure a high standard of safely delivered care and to strive to respond to the ever-changing needs related to the role of the nephrology nurse.

SPONSORED BY CANNT

MELVA STINSON, RECIPIENT OF THE CERTIFICATION/RECERTIFICATION BURSARY, WESTERN REGION

Biography/photo not available

CHERYL KALUPAR, RECIPIENT OF THE CERTIFICATION/ RECERTIFICATION BURSARY, WESTERN REGION

By Cheryl Kalupar, RN, CNeph(C), Winnipeg, MB

I graduated from the Health Sciences Centre School of Nursing in Winnipeg, Manitoba, in 1991 and worked in various areas developing new skills as a young new grad. I mentored many new grads along the way and became the charge RN in an effort to continue educating and mentoring students and staff. I finally found my passion in nephrology nursing. For the past 11 years I have worked in the Renal Transplant Clinic at the Health Sciences Centre in Winnipeg. I used my knowledge and expertise to assist me in writing and passing my CNeph(C) exam. Every day brings new experiences and great challenges in nephrology nursing.

I hope to continue along this pathway for many years to come.

BILLIE HILBORN, RECIPIENT OF THE CERTIFICATION/RECERTIFICATION BURSARY, ONTARIO REGION

By Billie Hilborn, RN, BScN, MHSc, CNeph(C), Toronto, ON

This is my 10th anniversary with CNeph(C) designation since earning it through examination in 2003. At that time I was a nephrology nurse with four years of hemodialysis experience, and had to learn about peritoneal dialysis, transplantation, and care of pediatric and maternal nephrology patients, which was difficult due to a lack of practical experience to reinforce what I was learning. Thankfully repeated reviews of the material allowed me to retain enough to pass the exam on the first attempt, because it was one of the most difficult I have ever written! I was very happy to earn initial certification and have successfully recertified twice through education and hours worked. It is a pleasure to attend CANNT conferences and receive recognition via the ribbons for 'CNeph' at the CANNT booth and 'Certification' ribbon at the CNA booth to attach to my ID badge. Certification has provided me with added knowledge that provides a solid background for involvement in leadership projects, such as our corporate patient safety initiative and unit-based Best Practice Teams aimed at continuous improvement in our quality of care.

My clinical experience as a front-line hemodialysis nurse extended from 1999 until 2012, when being certified helped me to earn and transition into anew role as educator for our unit. In this role I have the formal opportunity to encourage and assist colleagues in attaining certification, which I highly recommend.

MARY J. LARADE, RECIPIENT OF THE CERTIFICATION/RECERTIFICATION BURSARY, ATLANTIC REGION

By Mary J. Larade, RN, CNeph(C), Sydney, NS

I graduated from the Sydney City Hospital in 1977. I worked in the area of medical/surgical nursing for 10 years and then moved on to the nephrology program. For the last 26 years I have been learning from and working with CKD patients, mostly in hemodialysis, and have had the opportunity to mentor other nephrology nurses. At present I am the Optimal Care Coordinator covering vascular access and anemia management. I have been a CANNT member for several years, and have attended several conferences and presented four poster presentations. I am the CANNT liaison for our hospital and was chair of CANNT Atlantic 2006 in Sydney, NS. I received my certification in nephrology in 1998, and have maintained certification up to and including 2013. Nephrology nursing has offered endless opportunities for growth throughout my career.

BARBARA WILSON, LORI HARWOOD, AND ABE OUDSHOORN, RECIPIENTS OF THE CANNT 2013 JOURNAL AWARD

Biography/photo not available

Editors' Note: The manuscript that Barbara and her co-authors submitted "Moving beyond the perpetual novice: Understanding the experiences of novice hemodialysis nurses and cannulation of the arteriovenous fistula" was published in the January-March 2013 Issue of the CANNT Journal, and also received the CANNT 2012 Manuscript Award.

CREINA TWOMEY, PATRICK PARFREY, BRENDAN J. BARRETT, DAVID N. CHURCHILL, AND CHRISTINE Y. WAY, RECIPIENTS OF THE CANNT 2013 MANUSCRIPT AWARD

Biography/photo not available

Editors' Note: Creina and her co-authors submitted a manuscript for consideration for the CANNT 2013 Manuscript Award entitled "Responsiveness of The Patient's Perception of Hemodialysis Scale"

JANE ARMSTRONG, ORILLIA, ON, RECIPIENT OF THE CANNT 2013 POSTER AWARD (1ST PLACE)

Editors' note: Jane won this award for her poster presentation at CANNT 2013 entitled "Recording Independence"

DONNA VIVARAIS AND SANDRA WHITE, CORNWALL, ON, RECIPIENTS OF THE CANNT 2013 POSTER AWARD (2ND PLACE)

Editors' Note: Donna and Sandra won this award for their poster presentation at CANNT 2013 entitled "Creating an Environment Characterized by Safety, Respect and Dignity"

SUDARSHAN MEENAKHSI SUNDHARAM AND JULIO OLIVERIA, TORONTO, ON, RECIPIENTS OF THE CANNT 2013 POSTER AWARD (3RD PLACE)

Editors' Note: Sudarshan and Julio won this award for their poster presentation at CANNT 2013 entitled "Importance of Reuse in Dialysis and Its Environmental Impact"

SPONSORED BY AMGEN CANADA

NICHOLAS PHAN, BSC, RECIPIENT OF THE ALLIED HEALTH PROFESSIONALS GRANT

Biography not available

ARTI SHARMA PARPIA, RD, RECIPIENT OF THE ALLIED HEALTH PROFESSIONALS GRANT

By Arti Sharma Parpia, RD, Toronto, ON

Arti is a registered dietitian working with more than 250 hemodialysis patients at St. Michael's Hospital. She is currently completing her Master of nutritional sciences at the University of Toronto. Her thesis work will provide new quantitative information about the phosphorus and potassium content of foods with additives in the Canadian food supply, including food products labelled as "low sodium".

CANNT Membership

First Name _____

Last Name _____

Home Address _____

City _____

Province _____ Postal Code _____

Telephone (H) (_____) _____ - _____

(W) (_____) _____ - _____

Email _____

Employer _____

Employer Address _____

City _____

Province _____ Postal Code _____

Mailing Address Preferred ❑ Home ❑ Work

Do you consent to the use of your name and address on mailing lists that CANNT has considered pertinent and appropriate?
❑ Yes ❑ No

Do you consent to the use of your email for all correspondence with CANNT?
❑ Yes ❑ No

❑ New Member or ❑ Renewal

CANNT # (if renewal): _____

Membership Fee (HST #100759869)
Membership fee is tax deductible.
❑ One Year: $70.00 + HST/GST
❑ Two Years: $130.00 + HST/GST
❑ Student Rate: $35.00 + HST/GST*
**Proof of full-time enrolment must accompany application*
AB/BC/SK/MB/NT/NU/QC/YT: 5% GST; ON/NL/NB: 13% HST; PEI: 14% HST; NS: 15% HST

I enclose $ _____
made payable to Canadian Association of Nephrology Nurses and Technologists.

Method of payment:
❑ Cheque ❑ Money order ❑ Visa ❑ Mastercard

Cardholder Name: _____

Credit Card Number: _____

Expiry Date: _____ 3-digit CVV code: _____

Signature: _____

❑ I have attained CNeph(C)/cdt designation

❑ I am a member of CNA

Ontario applicants only
Do you belong to RNAO?
❑ Yes ❑ No

Professional Status
❑ Registered Nurse
❑ Registered Practical Nurse/Registered Nursing Assistant/Licensed Practical Nurse
❑ Technician
❑ Technologist
❑ Other (Specify) _____

Number of years in nephrology _____

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

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

Highest level of education

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

I am at present studying toward

Nursing	*Non-Nursing*
❑ Specialty Certificate	❑ Specialty Certificate
❑ Baccalaureate	❑ Baccalaureate
❑ Master's	❑ Master's
❑ Doctorate	❑ Doctorate

Primary area of practice
❑ Progressive renal insufficiency (pre-dialysis)
❑ Transplantation
❑ Hemodialysis
❑ Peritoneal
❑ Pediatrics
❑ Other (Specify) _____

Return to **CANNT**
Mailing Address:

CANNT,
P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0
Telephone (519) 652-6767 Fax (519) 652-5015

Demande d'adhésion

Prénom _____

Nom de famille _____

Adresse à domicile _____

Ville _____

Province _____ Code postal _____

Téléphone (D) (_____) _____ - _____

(T) (_____) _____ - _____

Courriel _____

Employeur _____

Adresse de l'émployer _____

Ville _____

Province _____ Code postal _____

Adresse de correspondance ❑ domicile ❑ travail

Acceptez-vous que l'ACITN ajoute votre nom et votre adresse sur des listes d'envois qu'elle juge pertinentes et appropriées?
❑ Oui ❑ Non

Avez-vous consentez à l'utilisation de votre e-mail pour toute correspondance avec l'ACITN?
❑ Oui ❑ Non

❑ Nouveau membre ou ❑ Renouvellement

Numéro de l'ACITN (si renouvellement):_____

Frais d'adhésion (TPS #100759869)
Les frais d'adhésion sont deductibles d'impots.
❑ Un an : 70,00 $ + TVH/TPS
❑ Deux ans : 130,00 + TVH/TPS
❑ Tarif étudiant : 35,00 + TVH/TPS*
**La demande doit inclure une preuve d'inscription à plein temps*
AB/BC/SK/MB/NT/NU/QC/YT : 5 % TPS; ON/NL/NB: 13 % TVH; PE: 14 % TVH; NS : 15 % TVH

Je joins $ _____
payable à l'ACITN.

Mode de paiement :
❑ Chèque ❑ Mandat de poste ou chèque visé
❑ Visa ❑ Mastercard

Nom du titulaire de la carte : _____

Numéro de la carte : _____

Date d'expiration : _____

Signature : _____

❑ J'ai obtenu la désignation CNeph(C)/cdt

❑ Je suis membre de l'ACI

Demandeurs de l'Ontario seulement
Faites vous partie de l'AOIA?
❑ Oui ❑ Non

Statut professionel
❑ Infirmière(ier) autorisée(sé)
❑ Infirmière(ier) auxilaire autorisée(sé) / infirmière(ier) auxilaire
❑ Technicienne/technicien
❑ Technologue
❑ Autre (spécifier) _____

Années d'éxperience en néphrologie _____

Domain de responsabilité
❑ Soins directs
❑ Administration
❑ Technologie
❑ Enseignement
❑ Recherche
❑ Autre (spécifier) _____

Milieu de travail
❑ Soins actifs
❑ Unité d'autosoins
❑ Services de santé indépendants
❑ Secteur privé

Plus haut niveau d'instruction?

Infirmière(ier)	*Autres*
❑ Diplôme	❑ Diplôme
❑ Baccalauréat	❑ Baccalaureat
❑ Maîtrise	❑ Maîtrise
❑ Doctorat	❑ Doctorat

Je poursuis présentement des études

Domaine infirmière(ier)	*Autre domaine*
❑ Certificat	❑ Certificat
❑ Baccalauréat	❑ Baccalauréat
❑ Maîtrise	❑ Maîtrise
❑ Doctorat	❑ Doctorat

Secteur de pratique spécialisé
❑ Insuffisance rénale progressive (pré-dialyse)
❑ Transplantation
❑ Hémodialyse
❑ Péritonéale
❑ Pédiatrie
❑ Autre (spécifier) _____

Poster à **ACITN**
Adresse postale :

CANNT/ACITN
P.O. Box 10, 59 Millmanor Place, Delaware, ON N0L 1E0
Téléphone (519) 652-6767 Télécopieur (519) 652-5015

PrCATHFLO® (alteplase, recombinant) is indicated for the restoration of function to central venous access devices.
Product monograph available at www.rochecanada.com

Hoffmann-La Roche Limited
Mississauga, ON L5N 6L7