CANNT JOURNAL
JOURNAL ACITN

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

Volume 18, Issue 1 January–March 2008

IN THIS ISSUE:

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2. National Kidney Foundation. K/DOQI Clinical Practice Guidelines for Bone Metabolism and Disease in Chronic Kidney Disease. *Am J Kidney Dis.* 2003;**42**(Suppl 3):S1-S201.
3. Renagel® Product Monograph, Genzyme Canada; 2006.

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The CANNT Journal
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Letter from the Editor: Gillian Brunier

2008: A special year

At last year's CANNT conference in Winnipeg, CANNT honoured me with a special award for 10 years of distinguished service with the **CANNT Journal.** I was extremely appreciative of this special award that I received from Lori Harwood, then CANNT president. Now, on top of that special award, I am again very appreciative for being successfully nominated by Faye Clark, CANNT past-president, to be among 100 nurses from across Canada to receive one of the Centennial Awards from the Canadian Nurses Association. I feel deeply honoured for such an award and shall be travelling to Ottawa in November to receive it.

The Centennial Awards are all part of the 100-year anniversary celebrations for the Canadian Nurses Association (1908–2008). Also this year, two further anniversaries will be fêted. At the CANNT 2008 conference in October in Quebec City, we shall all be celebrating 40 years of CANNT's existence (1968–2008), while Quebec City will be celebrating 400 years of existence (1608–2008). What a special year!

In this issue of the **CANNT Journal,** the first article is by Diane Watson, Advanced Practice Nurse in Nephrology at University Health Network, Toronto. Her article was awarded the 2007 CANNT Manuscript Award and is entitled "Post-dialysis 'Pre-dialysis' care: The cart before the horse—Advanced practice nurse intervention and impact on modality selection." Read for yourself how Diane, in a new consultant advanced practice nurse role at her institution, significantly increased the number of patients who started dialysis urgently, but chose home dialysis over incentre hemodialysis as their final dialysis modality.

The second article in this issue is Chronic kidney disease: The diagnosis of a "unique" chronic disease, by Anne Moulton, Hemodialysis Staff Educator, St. Joseph's Healthcare, Hamilton, Ontario. This article addresses and discusses the unique stressors and challenges for patients related to the diagnosis of chronic kidney disease requiring dialysis. Anne's passion for understanding the lives of patients with chronic kidney disease (CKD) requiring dialysis became a reality while working on an Advanced Care Practice Fellowship (ACPF) with the Registered Nurses Association of Ontario (RNAO) in 2003.

Again, if you were fortunate enough to attend CANNT 2007 in Winnipeg you would likely have met some of the pharmacists with the Manitoba Renal Program—they presented a total of six poster presentations and two podium presentations. The third article in this issue, entitled "Conversion from epoetin alfa to darbepoetin alfa within the Manitoba Renal Program: Evaluation of dose ratios," is the result of another research project by Colette Raymond and her colleagues at the Manitoba Renal Program.

We trust you will be motivated from reading these articles, plus the profiles of award winners from CANNT 2007 on pages 51 to 55, to consider submitting an abstract highlighting the excellent projects you are undertaking in your units to CANNT 2008 in Quebec City. Plan to join us in celebrating 40 years of CANNT. See the Call for Abstracts on pages 26 to 27 in this issue of the **CANNT Journal.**

Une année exceptionnelle s'annonce pour 2008

Lors du 39e congrès de l'ACITN à Winnipeg, j'ai reçu un prix spécial pour souligner mes 10 années de services exceptionnels au **Journal de l'ACITN.** J'étais très émue de recevoir ce prestigieux prix des mains de Lori Harwood, présidente à ce moment. Aujourd'hui, en plus de ce mérite, je suis une fois de plus très heureuse d'apprendre que ma candidature, déposée par Faye Clark, présidente sortante, a été retenue parmi celles de 100 infirmières et infirmiers dans tout le Canada pour recevoir les Prix du Centenaire de l'Association des infirmières et des infirmiers du Canada (AIIC). Je suis sincèrement honorée de recevoir une telle marque de reconnaissance et aussi me rendrai-je à Ottawa pour recevoir ce Prix en novembre prochain.

Les Prix du Centenaire ont été créés dans le cadre des célébrations du 100e anniversaire de fondation de l'AIIC (1908–2008). De plus, cette année marque deux autres anniversaires qui seront célébrés en grande pompe! Au Congrès de l'ACITN de 2008 qui aura lieu en octobre prochain dans la ville de Québec, nous allons célébrer le 40ième anniversaire de notre Association (1968–2008), alors que Québec fêtera son 400e anniversaire de fondation (1608–2008). Une année tout à fait exceptionnelle!

Dans ce numéro du Journal, le premier article a été rédigé par Diane Watson, infirmière en pratique avancée de néphrologie au University Health Network, à Toronto. Pour son article intitulé « Post dialysis 'Pre-dialysis' care: The cart before the horse—Advanced practice nurse intervention and impact on modality selection », elle a reçu en 2007 le Prix du meilleur manuscrit de l'ACITN. Je vous invite à lire son article pour apprendre comment, dans son nouveau rôle d'infirmière de pratique avancée au sein de son établissement de santé, elle a augmenté de façon considérable le nombre de patients qui, après avoir entrepris d'urgence la dialyse, ont choisi comme modalité de traitement la thérapie à domicile au lieu de l'hémodialyse en centre hospitalier.

Dans le deuxième article, intitulé « Chronic Kidney Disease: The diagnosis of a "unique" chronic disease », Anne Moulton, éducatrice auprès du personnel en hémodialyse, du St. Joseph's Healthcare, à Hamilton, en Ontario, aborde les enjeux associés au diagnostic d'insuffisance rénale chronique. L'auteure traite des facteurs de stress et des défis que doivent relever les patients qui vivent avec l'insuffisance rénale et dont leur survie dépend de la dialyse. Anne, qui cherche à comprendre la vie des patients sous traitement, a fait de cette passion son quotidien après avoir travaillé à un programme de recherche sur la pratique avancée des soins de santé (ACPF, de l'anglais Advanced Care Practice Fellowship) avec l'Association des infirmières et infirmiers autorisés de l'Ontario en 2003.

Si vous avez eu la chance de participer au congrès de 2007 de l'ACITN à Winnipeg, vous avez sans doute fait la connaissance de quelques pharmaciens du Programme de néphrologie du Manitoba—ils ont présenté au total six affiches scientifiques et deux communications orales. Le troisième article de ce numéro, qui s'intitule « Conversion from epoetin alfa to darbepoetin alfa within the Manitoba Renal Program: evaluation of dose ratios » est le fruit d'un autre projet de recherche effectué par Colette Raymond et ses collaborateurs du Programme de néphrologie du Manitoba.

Je vous invite donc à lire ces articles ainsi que les profils des gagnants des prix de l'ACITN de 2007 aux pages 51 à 55. N'hésitez pas à soumettre un résumé qui souligne les excellents projets que vous mettez de l'avant dans vos unités respectives en prévision du congrès de l'ACITN de 2008 qui aura lieu à Québec. Joignez-vous à nous pour les célébrations du 40e anniversaire de l'ACITN. Veuillez consulter notre invitation à présenter des communications aux pages 28 à 29 de ce numéro.

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Site web : www.cannt.ca

• **Voici les échéanciers à rencontrer pour soumettre des articles/nouvelles au journal :**
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Avril-juin – le 15 avril,
pour publication le 15 juin
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pour publication le 15 septembre
Octobre-décembre – le 15 octobre,
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Message from the President

It is with great pride that I present this, my inaugural message as your new CANNT president for 2007–2008. As I write this message, we are embarking upon the new year—a time when we often look back over the year gone before and take time to reflect. My past year, along with my learning curve as president elect, has provided me with the opportunity to experience health care services from a different perspective—as a couple of my close family members have been in need of hospital care. Throughout this time, there were many phone calls seeking clarification—what was a CT scan, and was it like an MRI? How uncomfortable is a bone scan? What is a PICC line? The experience has brought home to me how very much information patients need in order to feel informed and empowered—and how not all facets of health care are committed to providing that level of information. As I look around me with a new perspective at the nephrology community, I realize that nephrology care providers are a special breed. We are conscious of the efforts to which we must go to inform and educate our patients of the journey they face once they are diagnosed with CKD. Whether it be modality education by an RN in a clinic setting, or water treatment education by a technologist to a home hemodialysis patient, the teaching component is a key part of maintaining standards of care, and we embrace that responsibility with a great deal of commitment.

This and many other important messages were shared last fall at CANNT 2007 in Winnipeg, Manitoba, where a record number of posters and a number of excellent verbal presentations were made by nephrology care providers from all regions of the country. Special thanks to Florence Elyn and Marilyn Muir, co-chairs, and their planning committee members: Andy Bakker, Irmy Friesen, Yvonne Rhoden, and Robert Wiebe, and board contact Faye Clark for their commitment to the planning and execution of the conference. Thanks also to Heather Reid and her staff of Innovative Conferences and Communications who provided support and guidance to the planning committee.

At the spring board meeting, we will be finalizing the strategic planning process with a plan that will outline our direction for the next three to five years. Other initiatives on target for 2008 include finalization of the updated Nursing Standards of Practice document under the leadership of Marsha Wood, and an update of the Technological Standards under the leadership of Marc Héroux, VP Technologists. This issue of the journal contains the call for nominations for upcoming positions on the board. Please consider volunteering some of your time to your organization—the experience is very rewarding.

Finally, this is a very important year for us as we celebrate our 40th anniversary as an organization. Celebrations will be taking place at our 2008 Conference in Quebec City. The conference theme is "Our Past Turned Toward our Future," and the planning committee is working hard to provide an informative and dynamic program—but they need the assistance of the membership to make this happen. The call for abstracts is out and the submission deadline is April 1, 2008. Consider submitting an abstract about something you feel you do well in your program that you would like to share with others, and join us in Quebec City.

Alongside the CANNT 2008 planning committee is a committee working on our 40th anniversary celebrations. This committee is chaired by Faye Clark, former president. If you have any knowledge of our history, or any photos or information that you would like to share, please feel free to contact Faye at pfclark@nbnet.nb.ca

On behalf of the CANNT board, we wish each and every one of you a very happy and healthy 2008, and we look forward to meeting many of you over the coming year.

Alison Thomas, RN, MN, CNeph(C),
CANNT President

Message de la présidente

C'est avec grande fierté que je vous présente mon message inaugural à titre de votre nouvelle présidente pour l'exercice de 2007–2008. Au moment d'écrire ces quelques lignes, nous étions au seuil du nouvel an—moment de l'année où nous avons souvent tendance à faire une rétrospective et à prendre le temps de faire une introspection. L'an dernier, en plus de ma période d'apprentissage comme présidente désignée, j'ai pu faire l'expérience des services de soins de santé d'un point de vue différent—des membres de ma famille immédiate ont eu besoin de soins hospitaliers. Tout au long de cette période, j'ai reçu de nombreux appels téléphoniques pour clarifier certains points : Qu'est-ce qu'un tomodensitométrie? Est-ce comme l'imagerie par résonance magnétique? En quoi est-ce désagréable une scintigraphie osseuse? Qu'est-ce qu'un cathéter central inséré par voie périphérique? J'ai donc pu constater que les patients ont besoin d'une grande quantité de renseignements pour se sentir bien informés et habilités—et que ce ne sont pas tous les secteurs des soins de santé qui s'engagent à fournir l'information nécessaire. En regardant d'un œil nouveau ce qui se fait dans notre secteur d'activité, j'ai réalisé que nous—prestataires de soins en néphrologie—sommes d'une race à part. Nous sommes conscients des efforts que nous devons déployer pour informer et éduquer les patients afin de les préparer à leur parcours de soins une fois qu'ils ont reçu un diagnostic de maladie rénale chronique. Que ce soit l'éducation sur un mode de traitement par une infirmière en centre de dialyse ou que ce soit la formation sur un système de traitement d'eau par un technologue à un patient en hémodialyse à domicile, l'enseignement fait partie intégrante du maintien des normes de notre pratique. Et, nous nous acquittons de cette responsabilité avec beaucoup d'empressement.

Cet important message et bien d'autres encore ont été partagés l'automne dernier au Congrès annuel, qui a eu lieu à Winnipeg, au Manitoba, où un nombre record d'affiches scientifiques ont été exposées et d'excellentes communications orales ont été présentées par les professionnels de la santé en néphrologie provenant de toutes les régions du pays. Je tiens à remercier tout spécialement les coprésidentes de ce congrès, Florence Elyn et Marilyn Muir, les membres du Comité organisateur, Andy Bakker, Irmy Friesen, Yvonne Rhoden et Robert Wiebe, ainsi que Faye Clark, personne ressource pour le Conseil d'administration, pour leur dévouement dans la planification et l'exécution cet événement. J'aimerais aussi remercier Heather Reid et son équipe d'Innovative Conferences and Communications qui ont offert le soutien et l'orientation nécessaires au Comité organisateur.

À la réunion printanière du Conseil d'administration, nous finaliserons le processus de planification stratégique qui soulignera la direction de notre association pour les trois à cinq prochaines années. D'autres initiatives conformément à nos objectifs de 2008 incluent la mise à jour finale des documents intitulés « Normes de la pratique infirmière », sous la direction de Marsha Wood, et « Normes de la pratique technique », sous la direction de Marc Héroux, v.-p. des technologues. Ce numéro du bulletin d'information contient également l'appel des mises en candidatures pour les prochains postes à pourvoir au sein du Conseil d'administration. N'hésitez pas à poser votre candidature et à consacrer un peu de temps à votre Association—l'expérience est très gratifiante.

Enfin, 2008 est une année très importante pour l'ACITN puisqu'elle marque son 40^{e} anniversaire. Les célébrations se dérouleront pendant la tenue de notre prochain congrès qui aura lieu à Québec, sous le thème suivant : « Notre passé tourné vers l'avenir ». Le Comité organisateur travaille déjà d'arrache-pied à la préparation d'un programme informatif et dynamique–mais il souhaite faire appel à des bénévoles pour mener à bien ce projet. En outre, nous lançons l'invitation à présenter des communications; la date limite de soumission est le 1er avril 2008. Réfléchissez à la possibilité de présenter une communication sur un aspect de votre programme, dont vous êtes particulièrement fier et aimeriez partager avec vos collègues, et joignez-vous à nous à Québec.

Un comité ad hoc au comité organisateur local est responsable d'organiser les célébrations du 40e anniversaire. Ce comité est présidé par Faye Clark, ancienne présidente. Si vous avez des anecdotes sur l'ACITN, des photos ou tout autre renseignement pertinent que vous désirez partager, n'hésitez pas à communiquer avec Faye à pfclark@nbnet.nb.ca.

Au nom des membres du Conseil d'administration, je vous souhaite à vous tous, sans exception, beaucoup de bonheur et de santé en 2008, et j'espère rencontrer bon nombre d'entre vous au cours de la prochaine année.

Alison Thomas, inf. aut., M.Sc.Inf.,

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Regional reports
Rapports régionaux

Western Regional (Rick Luscombe)

Greetings from western Canada. I trust everyone had an enjoyable holiday season. Very exciting news from the west—we now have a new liaison from the Northwest Territories. I would like to extend a welcome to Angel McKay. Angel works at Stanton Territorial Hospital in Yellowknife.

Northwest Territories

- Stanton Territorial Hospital redefining its goals and objectives, as well as updating its policy and procedures at present.
- They had their first annual patient and staff Christmas Tea.
- Unit staff has been able to begin using the buttonhole technique with a couple of patients and it has been quite successful.

British Columbia

- Providence Health Care, Kidney Function Clinic is hiring two new nurses and creating a new position. The new nursing position will provide kidney function clinic services to new chronic parachute patients.
- The CanPrevent study is ongoing (national multicentre study following patients with a nurse/dietitian and guidelines).
- The "Combined Cardiac/Kidney/Diabetes Clinic" study has been underway for three years and will continue for two more. There were 150 original participants, there are now less than 75 "control" patients (exact number not known by us) and 31 remaining in the "treatment" arm of the study (numbers change due to death/dialysis starts).
- The "Models of Coordinated Specialty Care" (name to change) is progressing. This is a provincial initiative establishing heart/diabetes/kidney clinics in all regions. In Providence Health Care, Lee Clark is currently looking for space to hold the clinic and the hiring process is underway. British Columbia Institute of Technology (BCIT) will be running workshops in February to teach nurses to manage these clinics.
- Sechelt Community Dialysis Unit is now open six days a week starting January 8/08. Trained RNs for intra dialytic parentral nutrition administration back in December 2007.
- Integration of antibiotic resistant organism (ARO) patients in Sechelt starting January 15, 2008 (six of the seven Providence Health Care units have antibiotic resistant organism patients integrated).
- Incentre nursing staff now providing care for very complex patients from cardiac program, i.e., left ventricular assist device and vented patients. As cardiac surgeries increase, so does the need and workload in the renal program.
- Now actively recruiting donors for the Paired Kidney Exchange (PXC) program. We did two pairs in 2007 for a total of four living donor transplants.
- In B.C., we are actively recruiting and consenting interested recipients on the Deceased Donor Waiting List who are over 60 years of age for the Extended Criteria Donor Program (ECD). This allocates kidneys from deceased donors who are: over the age of 60 years or donors between the ages of 50 and 59 who have two or more of the following:
  - death from a stroke or cerebral vascular accident
  - a history of hypertension (high blood pressure)
  - the most recent creatinine greater than 130 mcm/L.
- In collaboration with B.C. Centre for Disease Control and the Public Health Nurses (PHN), we have developed a pre-transplant vaccination program. We are now doing more extensive baseline virology testing, which includes titres for common childhood illnesses (measles, mumps, rubella and varicella) when a patient is first referred for transplant. We then ask the patient's local PHN to give the needed vaccinations. This seems to be working well and the PHNs are so much better about being thorough and sending us back the documentation for our records.
- Kelowna Education day scheduled for May 2–4, with a Vascular Access Day to be incorporated into the itinerary.

Manitoba

- We had a successful Living Related Donor transplant in December.
- Working on developing a proposal to pilot a hypertension/pre-renal clinic out of our unit hopefully starting this spring.
- Health Sciences is expanding by 10 stations. Satellite units are expanding as well in size (three) and in locations (four).
- Renal Program Conference scheduled for September 26–28, 2008.

Saskatchewan

- A new hemodialysis satellite opened in Estevan on November 14, 2007. Estevan is now taking 12 patients, staffed by three RNs and two LPNs. The LPNs have full scope of practice enabling them to needle patients.
- The Saskatoon Renal Program is holding clinics for their hemodialysis satellite patients via long-distance technology! Satellite patients, who are seen four times yearly by the nephrologists, will be seen twice by Telehealth, utilizing an electronic stethoscope and camera, and twice in person.
- The Saskatchewan Transplant Program welcomed Dr. Abubaker Hassan, MD, FRCPC, to the program in September 2007 as second transplant nephrologist.

Southern Alberta

- Southern Alberta Renal Program had its first vascular access conference on November 18, 2007, in Calgary. One hundred and fifty staff attended (LPNs and RNs) from Calgary and satellite units, i.e., Drumheller, Medicine Hat, Hanna, etc.
- The conference's main objective—back to the basics in terms of access care and we focused mainly on fistulas. Debbie Eggers from B.C. presented on the cannulation program.

Northern Alberta

- Dialysis bus is finally up and running (between two towns: Edson and Whitecourt).

- Nephrology Information System (one database for Northern Alberta) is plodding along.

Thanks to liaisons Marilyn Muir, Mona Livingstone, Janice James, Julie Nhan, Ruth McCarrell, Janet Love, Angel McKay, Audrey Miller, Loretta Cruise, and Maureen Donnelly for their contributions.

Région de l'Ouest (Rick Luscombe)

Meilleurs vœux de la part de l'Ouest canadien! J'espère que vous avez tous passé du bon temps pendant la période des Fêtes. Nous avons de très bonnes nouvelles de l'Ouest. En effet, nous comptons un nouvel agent de liaison pour les Territoires du Nord-Ouest. Je profite de l'occasion pour souhaiter la bienvenue à Angel McKay. Angel travaille au Stanton Territorial Hospital à Yellowknife.

Territoires du Nord-Ouest

- Le Stanton Territorial Hospital redéfinit actuellement ses objectifs et met à jour ses politiques et procédures.
- Les patients et les membres du personnel se sont réunis pour la première fois pour prendre le thé à l'occasion de la Fête de Noël.
- Le personnel de l'unité de dialyse a commencé à utiliser la technique de « trou de bouton » avec quelques patients et obtient jusqu'à maintenant de bons résultats.

Colombie-Britannique

- Le centre de dialyse du Providence Health Care ajoute à son équipe deux nouvelles infirmiers (ières) et offre un nouveau poste en soins infirmiers. Ce poste est dédié au programme de dialyse de la Kidney Function Clinic pour les nouveaux patients PARACHUTE (Percutaneous Ventricular Restoration in Chronic Heart Failure).
- L'étude CanPREVENT (Canadian Collaborative Group for the Prevention of Renal and Cardiovascular Endpoints Trial) se poursuit (étude nationale multicentrique visant à comparer les soins usuels avec ceux coordonnés par une infirmière/diététiste qui applique les lignes directrices).
- Une étude contrôlée à répartition aléatoire visant à comparer les soins en polycliniques comparativement à ceux des cliniques spécialisées en soins cardiovasculaires, rénaux et diabétiques est en cours depuis trois années et doit se poursuivre pendant deux autres années. Cent-cinquante participants ont été recrutés au début de l'étude. Il reste moins de 75 patients randomisés (on ignore le nombre exact) et on en compte 31 dans le bras d'étude sous traitement (leur nombre fluctue en raison de décès et le début de remplacement rénal).
- L'élaboration d'un modèle de coordination des soins de spécialité progresse. Il s'agit d'une initiative provinciale pour la création de cliniques spécialisées en soins cardiovasculaires, rénaux et diabétiques dans toutes les régions. Au Providence Health Care, Lee Clark est actuellement à la recherche de locaux pour installer la clinique, et le processus de recrutement va bon train. Le British Columbia Institute of Technology (BCIT) donnera des ateliers de gestion en février à l'intention des infirmières de ces cliniques.
- Le centre de dialyse de Sechelt est maintenant ouvert six jours sur sept depuis le 8 janvier 2008. La formation des infirmières et infirmiers autorisés sur l'alimentation parentérale intradialytique a eu lieu en décembre 2007.
- Le Centre de Sechelt a intégré dans leur programme les patients porteurs d'organismes résistants aux antibiotiques depuis le 15 janvier 2008 (six des sept unités du Providence Health Care ont intégré de tels patients).
- Le personnel infirmier en milieu hospitalier prodigue maintenant des soins très complexes aux patients inscrits au programme cardiaque, c.-à-d. des patients possédant un dispositif d'assistance ventriculaire gauche et des patients ventilés mécaniquement. Étant donné l'augmentation des interventions chirurgicales cardiaques, les besoins associés à ces interventions se font sentir proportionnellement au sein du programme de néphrologie.
- Nous sommes en période active de recrutement de donneurs pour le Programme de greffes rénales avec donneurs vivants non apparentés (PXC). Nous avons jumelé deux paires en 2007 pour un total de quatre greffes de donneurs vivants.
- En Colombie-Britannique, nous recrutons activement des patients consentant à s'inscrire sur la liste d'attente pour donneurs décédés qui ont plus de 60 ans pour le Programme de sélection des donneurs. Ce programme permet de prélever les reins de donneurs décédés qui sont âgés de plus de 60 ans ou qui sont âgés de 50 à 59 ans et qui présentent au moins deux des critères de sélection suivants :
  - décès à la suite d'un accident vasculaire cérébral (AVC);
  - antécédent d'hypertension (tension artérielle élevée);
  - dernier taux de créatinine supérieure à 130 mcm/L.
- En collaboration avec le Centre pour le contrôle et la prévention des maladies (CDC) de la Colombie-Britannique et les infirmières en santé publique, nous avons mis sur pied un Programme de vaccination avant la greffe. Nous effectuons maintenant un examen virologique complet au préalable, incluant les maladies infantiles communes (rougeole, oreillons, rubéole et varicelle) lorsqu'un patient est dirigé pour la première fois en transplantation. Le personnel en santé publique de la localité du patient est responsable de donner les vaccins nécessaires. Ceci semble bien fonctionner, car ce service ests spécialisé dans ce domaine d'activité en plus de faire parvenir par la suite la documentation pertinente pour la tenue de nos dossiers.
- Les Journées de formation continue à Kelowna sont prévues du 2 au 4 mai prochain. Il y aura aussi une Journée de formation sur la gestion des accès vasculaire inclue dans le programme.

Manitoba

- Nous avons effectué avec succès une greffe rénale d'un donneur vivant en décembre.
- Nous travaillons à la rédaction d'une proposition pour diriger un centre externe d'hypertension/pré dialyse, dont les activités devraient, espérons-le, démarrer au printemps.
- Au Health Sciences, un ajout de 10 postes de traitement est en cours. Les unités satellites prennent également de l'expansion en taille (dont trois d'entre elles) et en nombre (dont quatre d'entre elles).

- Un colloque sur le programme de néphrologie est prévu du 26 au 28 septembre.

Saskatchewan

- Un nouveau centre satellite de dialyse a ouvert ses portes au Estevan le 14 juillet 2007. À l'heure actuelle, Estevan dessert 12 patients et compte trois infirmières autorisées (I.A.) et deux infirmières auxiliaires autorisées (I.A.A.). Les I.A.A. prodiguent des soins infirmiers complets, selon leur champ de compétence incluant la technique de ponction d'une fistule.
- Le Programme de néphrologie de Saskatoon offre maintenant des séances de consultations cliniques avec ses patients en hémodialyse en région éloignée par télémédecine! Les patients des centres satellites ont quatre visites de suivi par année avec les néphrologues, dont deux en personne et deux par e-santé ou télémédecine, en utilisant un stéthoscope électronique et une caméra.
- En septembre 2007, le Dr Abubaker Hassan, FRCPC, s'est joint à l'équipe du programme de transplantations de la Saskatchewan à titre de second néphrologue aux transplantations.

Sud de l'Alberta

- Le programme de néphrologie du sud de l'Alberta a tenu son premier symposium sur la gestion des accès vasculaire le 18 novembre 2007 à Calgary. Cent-cinquante membres du personnel infirmier (I.A. et I.A.A.) de Calgary et des unités satellites, c.-à-d., Drumheller, Medicine Hat, Hanna, etc., y ont assisté.
- Cette rencontre portait principalement sur les notions élémentaires à propos des soins qu'il faut apporter à l'accès vasculaire, plus précisément aux fistules. Debbie Eggers de la Colombie-Britannique a présenté le programme de formation de ponction de la fistule.

Nord de l'Alberta

- L'unité de dialyse mobile (autobus) est enfin fonctionnelle (couvrant le territoire entre les villes d'Edson et de Whitecourt).
- Le Système de gestion informatisée des soins en néphrologie (base de données dans le nord de l'Alberta) est aussi en fonction.

Nous tenons à remercier les agentes de liaison de l'Ouest canadien pour leurs précieuses contributions : Marilyn Muir, Mona Livingstone, Janice James, Julie Nhan, Ruth McCarrell, Janet Love, Angel McKay, Audrey Miller, Loretta Cruise et Maureen Donnelly.

Ontario (Jane Alfarero)

This year (2008), the CANNT conference will be held in Quebec City. The city will be celebrating its 400th anniversary and CANNT will be celebrating 40 years since its inception.

Nursing is changing rapidly as reflected by the milestone of CANNT. Many units across Ontario have faced challenges of different forms. Expansions of units cannot meet the booming dialysis population and, in most instances, shortage of dialysis nurses. Quarterly reports from unit liaisons capture all CANNT initiatives that interest us all in the nephrology world.

The College of Nurses of Ontario has decided not to include nephrology as a primary area of practice in the Annual Registration Renewal.

Central East and Toronto Region

- A CANNT dinner symposium was held at Unity Hall (University Health Network) on November 19, 2007. Dr. Chris Chan was the speaker on "Nocturnal Hemodialysis". It was well attended by 36 nephrology nurses from across the Greater Toronto Area and stimulated much enthusiasm about the topic. The next CANNT dinner symposium will be this spring. The topic will be decided based on suggestions provided by the attendees. Further details will be posted on the CANNT website.
- At University Health Network (Toronto General Hospital) staff attend educational rounds every Thursday presented by a multidisciplinary team. There's an ongoing research project with TEGO caps.
- The patient photo ID program is almost completed at Humber River Regional Hospital. All of the patients' pictures are put on the Kardex as an identifier, certainly helpful with many similar names and a client population that does not speak English or understand the pronunciation of their names.

Expansion to 17 more stations involved relocation of the home dialysis program back to the Keele site. It means more travelling for the multidisciplinary team.

There is a hospital-wide program called "Green ID band" that means use this arm only for venipuncture and blood pressures to save grafts and fistulas. This is working well on the inpatient units.

The unit has initiated a new CVC access policy that involves more vigorous aspiration and flushing to help with problematic flows or to prevent problematic flows.

- All Saints Day Symposium (Oct. 14) was well attended. It was a collaboration between St. Joseph's Health Centre and St. Michael's Hospital Renal Program.

  St. Michael's Hospital ICU is currently using Prismaflex™ for CRRT.

  Two advanced practice nurses are now working in hemodialysis at St. Michael's alongside staff nephrologists, providing patient care on selected shifts. Patient and staff feedback are positive for this new model of care.

  Pamela Robinson is the new Clinical Leader Manager for inpatient nephrology and nocturnal hemodialysis.
- Hemodialysis Unit at Collingwood General and Marine Hospital is now using hemocontrol, which monitors patients' blood volume.
- Orillia Soldier's Memorial Hospital (hemodialysis unit) had a CANNT dinner with Rosa Marticorena from St. Michael's Hospital to speak about buttonhole technique.

  Hemodialysis unit continues to participate in the DOPPS study and is utilizing data to make its program better.
- Barrie Royal Victoria Hospital (hemodialysis unit) had a three-week trial of new catheter caps. The decision has yet to be made to change over to new catheter caps.

  Congratulations to Susan Placko for being nominated to the CANNT board as the website coordinator/treasurer.
- November 14 was an annual nephrology symposium for health care providers presented by Peterborough Regional Renal Program with a focus on diabetes,

glomerular filtration rate (GFR), hypertension, nephrology in ER, diuretics, end-of-life discussion, dietary myths and the top 10 questions for nephrologists. Also, Oct. 4 was a patient education event in Cobourg put on by the staff of Peterborough Regional Renal Program with a focus on renal diet and fitness.

PD support group at Peterborough Regional Renal Program had an education event focused on topics such as preventing PD complications and diet, as well as social time for PD patients and families.

- St. Michael's transplant program did a road show trip last October. It was an opportunity to learn more about their program and transplants.

  Renal insufficiency nurses are launching a group session for pre-dialysis patients to teach them diet issues, medications, modalities and access care and more.
- Oakville-Trafalgar Memorial Hospital (renal unit)—Three RNs attended CANNT in Winnipeg. One RN had a poster presentation regarding the Patient Education Tracking Tool. Final approval for the first satellite unit in Burlington was received. Expected opening is the end of 2008. The unit is starting an education series for staff in long-term care facilities that care for dialysis patients.

  Congratulations to Janet Baker, president-elect for CANNT.
- St. Joseph's Health Science Centre (Toronto) is in partnership with Toronto Rehabilitation Institute (TRI) to establish a six-station level II dialysis unit at TRI's Queen Elizabeth Centre (Dunn Avenue). It will provide service to complex continuing care (CCC) dialysis patients. It is expected to be opened in April 2009.

Eastern Ontario

- Hawkesbury General Hospital Satellite Hemodialysis Unit was hit with gastroenteritis. Fortunately, it was contained. There were only a few patients and staff affected.

  The unit is working on having a shield-like window installed at the nursing station to enhance confidentiality. A portable digital scale was recently purchased, which will facilitate accurate weight measurement.
- Cornwall Community Hospital (hemodialysis unit) is working on changing to totally "needleless", which means all fistulas and grafts.
- Two staff from The Ottawa Hospital (home dialysis unit) presented at CANNT conference. Initiation of computerization in Nephrocare for PD. Development of new worksheets for clinic visits and infections to facilitate documentation in Nephrocare. Staff has expressed interest in participating in CANNT conference. They are researching topics.
- The Ottawa Hospital (Civic campus) nephrology program is working towards the incorporation of the Registered Nurses Association of Ontario (RNAO) Best Practice guidelines for the diabetic patients in hemodialysis population. The hemodialysis unit was nominated by patients and their families for The Team Nursing Recognition Award at the Ottawa Hospital. There were two RNs who received their CNeph(C), one RN completed her Masters in Nursing and one RN completed her nurse practitioner education.
- During the holidays, Winchester Memorial Hospital (satellite of The Ottawa Hospital) had dialyzed seven dialysis (visitor) patients. The unit is close enough to Ottawa and Cornwall for dialysis patients to travel back and forth.
- We are still looking for a CANNT liaison at The Ottawa Hospital (Riverside campus). Paula Fraser has relinquished her position (as unit liaison). Congratulations, Paula, for your new corporate position related to vascular access.

Dr. Chris Chan was the speaker on "Nocturnal hemodialysis" at a CANNT dinner symposium, held at Unity Hall (University Health Network), Toronto, on November 19, 2007.

Southwest and Central South Region

- The unit expansion at Grand River Kitchener is progressing; the last update was that the Freeport unit would be opening in the spring. No date has been set yet for Palmerston, but it is moving forward.
- "My Care Source," a chronic kidney disease (CKD) post for patients to obtain information on renal disease, lists of current medications and others, will be up and running.
- London Health Sciences Centre has new Vascular Access Manager, Kati Matos. Vascular Best Practice Task Force will continue to meet under her direction.

North Region

- Two RNs at North Bay Hospital (renal unit) participated in a Vascular Access Model of Care workshop in Mississauga this past November. This was part of The Hemodialysis Access Initiative for

the Ministry of Health in Ontario. The final document has been prepared and submitted to the Ministry of Health by Trish O'Brien. The unit is waiting to hear how this initiative will be received and how the unit can initiate a vascular access monitoring program.
- The unit welcomes Veronica Tooley as Nephrology Clinic Nurse and wishes well to Patricia Osmun in her retirement. Patricia dedicated 29 years of service to the renal unit.

Région de l'Ontario (Jane Alfarero)

Le Congrès de 2008 de l'ACITN aura lieu dans la ville de Québec, qui célèbre son 400e anniversaire de fondation ainsi que l'ACITN qui célèbre du même coup son 40e anniversaire d'existence.

La néphrologie évolue rapidement comme on peut le constater à la lumière de nombreux progrès de l'ACITN. De nombreuses unités de soin en Ontario ont relevé plusieurs défis. L'agrandissement des unités à lui seul ne peut répondre à la croissance exponentielle de la population des insuffisants rénaux et, dans la plupart des cas, combiné à la pénurie d'infirmières spécialement entraînées. À la lecture des rapports trimestriels des agentes de liaison, on peut saisir toutes les initiatives de l'ACITN qui touchent chacun d'entre nous œuvrant en néphrologie.

L'Ordre des infirmières et infirmiers de l'Ontario (OIIO) a décidé de ne pas inclure la néphrologie comme secteur de soins primaires de la pratique pour le renouvellement de l'immatriculation.

Région du Centre-Est et de Toronto
- Un séminaire suivi d'un souper organisé sous la bannière de l'ACITN a eu lieu au Unity Hall (University Health Network), le 19 novembre dernier. Le Dr Chris Chan a donné une présentation sur l'hémodialyse nocturne. Trente-six infirmières en néphrologie de la région du Grand Toronto ont assisté à cette présentation et ont fait preuve d'un grand enthousiasme à l'égard du sujet. Le prochain séminaire est prévu au printemps. Nous choisirons le sujet en fonction des suggestions qui ont été soumises par les participantes du dernier séminaire. Veuillez consulter le site Web pour plus de détail.
- Au University Health Network (Toronto General Hospital), le personnel assiste à une série de séminaires tous les jeudis qui sont présentés par une équipe multidisciplinaire. Un projet de recherche est en cours sur les capuchons TEGO.
- Le programme Carte photo d'identité des patients est presque terminé au Humber River Regional Hospital. La photo de tous les patients a été prise et enregistrée dans un fichier pour faciliter l'identification des patients, étant donné qu'il y a de nombreux noms similaires et qu'une partie de la population ne parle pas anglais ou ne comprend pas la prononciation de leur nom. L'expansion pour l'ajout de 17 postes de traitements a entraîné de nouveau le transfert du programme de dialyse à domicile au centre Keele, ce qui exige plus de déplacement pour l'équipe multidisciplinaire. Un autre programme, Bracelet vert d'identité, a été instauré à la grandeur de l'hôpital. Ce bracelet indique au personnel infirmier qu'il doit utiliser ce bras pour les prises de sang et de la tension artérielle afin de sauvegarder le bras comportant la fistule. Ce programme fonctionne bien pour les patients hospitalisés. L'unité a établi une nouvelle politique sur l'accès par cathéter veineux central (CVC) qui requiert une aspiration et une irrigation plus vigoureuses afin d'éviter ou de prévenir toute occlusion.
- Le Séminaire d'une journée, en collaboration avec le St. Joseph's Health Centre et le programme de néphrologie du St. Michael's Hospital, qui a eu lieu le 14 octobre dernier, a enregistré un bon taux de participation. L'unité des soins intensifs du St. Michael's Hospital utilise actuellement des moniteurs d'hémodialyse Prismaflex™ pour la thérapie de remplacement rénal continu (CRRT). L'unité d'hémodialyse du St. Michael's compte maintenant deux infirmières de pratique avancée, en plus des néphrologues membres du personnel, qui offrent des soins aux patients sur différents quarts de travail. La rétroaction des patients et des membres du personnel est positive en ce qui concerne ce nouveau modèle de soins. Pamela Robinson est la nouvelle responsable clinique de néphrologie et d'hémodialyse nocturne pour les patients hospitalisés.
- À l'unité d'hémodialyse du Collingwood General and Marine Hospital, le personnel utilise maintenant un moniteur HemoControl qui surveille le volume sanguin du patient.
- À l'unité d'hémodialyse d'Orillia Soldier's Memorial Hospital, un souper-conférence de l'ACITN a eu lieu. La conférencière, Rosa Marticorena, du St. Michael's Hospital a présenté la technique du trou de bouton. L'unité continue sa participation à l'étude DOPPS et utilise les données pour améliorer son programme d'hémodialyse.
- À l'unité d'hémodialyse du Barrie Royal Victoria Hospital, on a procédé à une étude de trois semaines des nouveaux capuchons pour cathéter. Une décision doit être prise quant à l'utilisation de ces capuchons. Félicitations à Susan Placko pour sa nomination au C.A. de l'ACITN à titre de trésorière et de responsable du site Web.
- Le 14 novembre dernier a eu lieu le Symposium annuel de néphrologie pour les prestataires de soins de santé. Ce symposium était présenté par le programme régional de néphrologie de Peterborough et portait notamment sur le diabète, le débit de filtration glomérulaire, l'hypertension, la néphrologie en salle d'urgence, les discussions sur les derniers moments de la vie, les mythes entourant l'alimentation et les dix grandes questions pour les néphrologues. De plus, le 4 octobre dernier à Cobourg, le personnel programme régional de néphrologie de Peterborough a organisé une activité d'éducation pour les patients pour parler plus particulièrement de la forme physique et du régime destiné aux patients atteints d'insuffisance rénale chronique. Le groupe de soutien en DPAC du programme régional de néphrologie de Peterborough a reçu une activité éducative orientée sur des sujets tels que la prévention des complications en DPAC, l'alimentation et les activités sociales pour les patients en DP et leur famille.
- Le personnel du programme de transplantation du St. Michael's a fait une

tournée de présentations en octobre dernier. Ce fut une occasion d'en apprendre davantage sur ce programme et les transplantations. Les infirmières en insuffisance rénale ont mis sur pied une séance de groupe pour les patients en prédialyse pour les éduquer sur les enjeux d'un régime adapté, les médicaments, les modes de traitement, les soins à apporter à l'accès, etc.

- Trois infirmières autorisées de l'unité de néphrologie d'Oakville-Trafalgar Memorial Hospital ont assisté au Congrès de l'ACITN à Winnipeg. Une infirmière a présenté une affiche scientifique sur un outil de suivi pour la formation du patient. L'approbation pour un premier centre satellite à Burlington a été reçue. L'ouverture du centre est prévue pour la fin de 2008. Le centre entame une série de formation pour le personnel des installations de longue durée offrant des soins aux patients dialysés. Félicitations à Janet Baker—présidente désignée de l'ACITN.
- Le St. Joseph's Health Science Centre (Toronto) a constitué un partenariat avec le Toronto Rehabilitation Institute (TRI) pour établir un centre de dialyse de stade II comportant six postes de traitements au TRI du Queen Elizabeth Centre (sur Dunn Avenue). Ce centre offrira des services continus complexes aux patients dialysés. Son inauguration est prévue pour avril 2009.

Est de l'Ontario

- L'unité satellite d'hémodialyse de l'Hôpital général de Hawkesbury a été touché par une épidémie de gastroentérite qui, fort heureusement, a été circonscrite. Seuls quelques patients et membres du personnel ont été touchés.
- Le centre a fait une demande pour installer des écrans d'intimité au poste des infirmières afin d'améliorer la confidentialité. De plus, on a fait récemment l'acquisition d'un pèse-personne portatif qui facilite l'évaluation précise du poids.
- L'unité d'hémodialyse du Cornwall Community Hospital se prépare à passer à un environnement « sans aiguille », ce qui signifie l'utilisation exclusive de fistules.
- Deux membres du personnel de l'unité de dialyse à domicile de L'Hôpital d'Ottawa ont présenté des communications orales au congrès de l'ACITN. La première présentation portait sur l'instauration de l'informatisation avec NephroCare® en DPAC et l'autre, sur la création de nouvelles feuilles de travail pour répertorier les visites cliniques et les infections afin de faciliter la documentation dans NephroCare®. Le personnel a signifié son désir de participer au prochain congrès de l'ACITN et cherche activement un sujet de présentation.
- Le personnel du programme de néphrologie de L'Hôpital d'Ottawa (campus Civic) travaille à l'intégration du guide des meilleures pratiques de l'Association des infirmières et infirmiers autorisés de l'Ontario (AIIAO) pour les patients diabétiques au sein des patients en hémodialyse. L'unité d'hémodialyse a été retenue comme candidate par les patients et les membres de leur famille pour le Prix d'excellence du travail d'équipe pour les soins infirmiers de L'Hôpital d'Ottawa. Deux infirmières autorisées ont reçu la certification CNéph(C), une a terminé sa maîtrise en sciences infirmières et une autre a terminé sa formation comme infirmière praticienne (I.P.).
- Durant la période des Fêtes, le Winchester Memorial Hospital (satellite de L'Hôpital d'Ottawa) a accueilli sept patients « visiteurs » pour leur dialyse. L'unité est située assez près d'Ottawa et de Cornwall pour permettre aux patients dialysés de faire la navette.
- Nous sommes toujours à la recherche d'un agent de liaison pour les activités de l'ACITN à L'Hôpital d'Ottawa (campus Riverside). Paula Fraser a renoncé à ses responsabilités d'agente de liaison pour accepter le poste de coordonnatrice aux accès vasculaire. Félicitations Paula!

Région du Sud-Ouest et du Centre-Sud

- Les travaux d'agrandissement de l'unité de dialyse du Grand River Hospital à Kitchener progressent. D'après la dernière mise à jour, l'unité Freeport devrait ouvrir ses portes au printemps. Aucune date n'a encore été fixée pour le centre satellite de dialyse à Palmerston, mais les travaux avancent.
- My Care Source (en anglais seulement) est un portail nouvellement créer sur le Web pour donner de l'information aux patients atteints d'une maladie rénale sur différents sujets comme l'insuffisance rénale chronique, les médicaments courants, etc.
- Kati Matos du London Health Sciences Centre est la nouvelle coordonnatrice aux accès vasculaire. Le groupe de travail sur les meilleures pratiques en accès vasculaire continuera de se rencontrer sous sa direction.

Nord de l'Ontario

- En novembre dernier, deux infirmières autorisées de l'unité de dialyse du North Bay Hospital ont participé à un atelier sur un modèle de soins dans la gestion des accès vasculaire à Mississauga. Cette initiative est née d'un projet provincial du ministère de la santé de l'Ontario. Trish O'Brien est responsable de la rédaction des recommandations et a soumis le rapport aux personnes concernés. L'équipe attend l'approbation du rapport pour poursuivre sont travail.
- Après 29 ans de service au sein de l'unité de dialyse, Patricia Osmun prend une retraite bien méritée. Nous lui souhaitons une excellente retraite.

Québec (Lisette Lafrenière)

First, I would like to take the time to thank you for your support throughout the year. Several unit liaisons sent me messages and updates from their dialysis centres. It is very interesting to learn, to report back and to share what's going on in all the dialysis clinics of our "belle province" with the rest of our beautiful country. 2008 is already at our gates and I'm quite sure that it will be a special year. A good year of vintage as we say! 2008 first started with great festivities surrounding the opening celebrations of the 400th anniversary of the founding of Quebec City. It's only the beginning, as the celebrations will be going on all year long. In addition to these festivities, CANNT is celebrating its 40th anniversary, which will be highlighted during the annual conference scheduled in October in the beautiful city of Quebec, in the heart of celebrations of the 400th. Everything is quite ready and we are expecting you in great numbers. Please take note that the

submission deadline is April 1, 2008, if you are considering doing a presentation at the CANNT 2008 Conference. As we are the host province, it would be nice to be well-represented. So, I'm looking forward to receiving your abstracts. Please take note that you will be able to present in the language of your choice, French or English. Documents on the writing protocol have been sent to your units. However, if you have any questions, don't hesitate to contact me via the website, **www.cannt.ca**, or by e-mail at **lisette.lafreniere@ssss.gouv.qc.ca**. I'm looking forward to meeting you in the "Petit Champlain" Quarter! I wish you all the best in 2008!

CSSS de la Vallée de l'Or, Val-D'Or

Just to let you know that in addition to the donation we received to purchase some dialysis chairs, our Hospital Foundation made a donation enabling us to buy two hemodialysis machines. What an outstanding year end!—Julie Lagrange

CSSS du sud de Lanaudière—Hôpital Pierre-Le Gardeur

Our dialysis centre enjoyed a significant growth for the past two years, 25% per year. We informed our local Health Services Agency in order to adjust our human, material and financial resources. We strive toward our mission to give quality health care and services in a continuum of care. Moreover, we put a priority on transplantation and we are very proud of our achievements. The impact is major: about 15 patients are on a waiting list as immediate recipients and five more are in the process. The Prevention Clinic is fast-expanding, today more then 300 patients benefit from it.

In June 2008, a team from the Canadian Council on Health Services Accreditation will visit our renal unit. Every effort will be made in preparations for their visit.—Lisette Lafrenière

CSSS Haut-Richelieu/Rouville

We held a conference dinner on December 13, 2007. The event gathered 29 nurses, five of them were from the dialysis centre in Granby, as well as two pharmacists from our hospital. A wide diversity of topics was discussed from the importance of examining each patient's feet, including the monofilament test, to which procedure we should use if a patient does not show up for his/her hemodialysis treatment. The speakers were nurses and pharmacists from our dialysis centre. Despite the bad weather (we had a major snow storm that evening), few were missing.

Since last November, we are pleased to have among our team three nurses from France who are working with us in hemodialysis. It is very rewarding to share our common, as well as our different experiences between both countries. Please let me introduce you to Louisa Khiri, Noëlle Raimond and Stéphane Kezelian.

During the month of January, we will start the implementation process of the NephroCare® Software.—Hélène Perron

CUSM

Two assistant head nurses will be stationed at the Montreal General Hospital: Alexandra Guignard and Rita Di Lella. We welcome them to our team. In addition, in peritoneal dialysis, the patients from the Montreal General Hospital and the Royal Victoria Hospital will be jointly followed in partnership with the CLSC (local community service centres).

We learned that Dr. Keith, nephrologist at the Royal Victoria Hospital, is leaving us soon for the United-States.—Marie-Josée Stonely

CSSS d'Antoine-Labelle, Rivière-Rouge

It's already been seven months since the opening of the de la Rouge Satellite Centre. To summarize, the message sent recently by Nicole Rondeau, Unit Manager, a lot of things were done. Whether at a clinical, technological, human or ethical level, every effort will be made in order to reach the highest quality standards. In this case, it's a win-win situation, both for the patients and the staff who work closely with them. The team spirit seems to be the cornerstone of the success since the roll-out of this unit. Everything is based on values, respect and dialogue in compliance with the code of conduct of the CSSS d'Antoine-Labelle. The "three Ps" rule—patience, perseverance and pleasure at work—promotes social success and creates a good understanding environment. In a nutshell, at the onset of 2008, what can we wish for more than to pursue everything that has been undertaken in a continuum of improving health care and services?

Reminder:

The next SQN Conference (Société québécoise de néphrologie) will be held May 1–3, 2008, at Manoir Saint-Sauveur, in Saint Sauveur, in the Laurentian Mountains, in Quebec.
www.sqn.ca
Dr. Martine Leblanc, nephrologist
SQN President
mleblanc.hmr@ssss.gouv.qc.ca

Sir Mortimer B. Davis Jewish General Hospital, in Montréal

All the focus is currently put on the orientation of new nurses. We maintained a good average, i.e. seven in the last seven months. We will soon be maximizing the capacity of our new pavilion and, thus, rebalance the occupancy rate of the two units. This organizational change will enable us to meet the increasing number of "visitors". We wish you all the best in 2008!—Francine Manceau

Région Québec (Lisette Lafrenière)

Juste un petit mot pour vous remercier du soutien et du support que m'avez apportés tout au long de l'année. Plusieurs centres m'ont fait parvenir des messages et des nouvelles de leur centre de dialyse. Il est très intéressant de connaître, de faire connaître et de partager ce qui se passe dans les centres de dialyse de notre belle province avec le reste de notre beau pays. Déjà 2008 est à nos portes et je suis persuadée que cette année sera exceptionnelle. Un grand cru comme on dit par chez nous! Elle a d'abord commencée par de grandes festivités entourant les cérémonies d'ouverture pour le 400ième anniversaire de la fondation de la ville de Québec. Ce n'est que le début car, le tout se poursuivra tout au long de l'année. De plus, pour ajouter aux festivités, l'association ACITN/CANNT fête son 40ième anniversaire qui sera souligné lors de la tenue du congrès du CANNT 2008 prévue en octobre prochain dans la belle ville de Québec au cœur même de l'emplacement des festivités du 400ième. Alors, la table est mise et nous vous attendons en grand nombre. Je profite de l'occasion pour vous informer que la date limite pour soumet-

tre un texte pour une présentation lors du symposium national de l'ACITN/CANNT 2008 est le 1 avril 2008. Nous sommes la province hôte et il serait intéressant d'être bien représenté. Alors je vous invite à nous faire parvenir vos textes. Il est à noter que vous pourrez présenter dans votre langue maternelle. Des documents à ce sujet ont été acheminés dans vos centres sur le processus de rédaction cependant pour toutes questions, vous pouvez toujours m'envoyer un message via le site de l'association, **www.cannt.ca** ou encore un courriel, **lisette.lafreniere@ssss.gouv.qc.ca**

Au plaisir de vous voir dans le quartier du petit Champlain! Bonne et heureuse année 2008!

CSSS de la Vallée de l'Or, Val D'Or

Juste un petit mot pour vous dire qu'en plus du don que nous avons reçu pour l'achat de fauteuils, la Fondation de notre centre hospitalier nous a fait cadeau d'un montant nous permettant l'achat de 2 appareils d'hémodialyse. Toute une belle fin d'année!—Julie Lagrange

CSSS du Sud de Lanaudière—Hôpital Pierre-Le Gardeur

Notre centre a connu une croissance assez substantielle depuis les deux dernières années de l'ordre de 25 % par année. Nous en avons informé l'Agence des services sociaux de notre région afin d'ajuster nos ressources autant humaines, matérielles que financières. Nous poursuivons notre mission qui consiste à donner des soins et des services de qualité dans un continuum de soins. D'ailleurs nous avons fait du dossier greffe une priorité et nous sommes fiers des résultats. L'impact est majeure soit : présentement une quinzaine de patients sont sur une liste à titre de candidats immédiats et que 5 autres sont en cours de processus. La clinique de prévention continue de prendre de l'expansion. Actuellement plus de 300 patients en bénéficient.

En juin 2008, une équipe représentant le conseil Canadien d'agrément des services de santé visitera l'unité de la suppléance rénale. Tous les efforts sont déployés en vue de la préparation de la venue du CCASS.—Lisette Lafrenière

CSSS Haut Richelieu/Rouville

Nous avons fait un souper conférence le 13 décembre. Événement qui réunissait 29 infirmières dont 5 infirmières du centre de dialyse de Granby ainsi que 2 pharmaciens de notre centre. Les thèmes étaient très variés allant de l'importance de procéder pour chaque client à l'examen des pieds incluant le test au monofilament à : quelle procédure doit-t-on exécuter si un client ne se présente pas pour son traitement en hémodialyse?

Les conférenciers étaient des infirmières et pharmaciens de notre centre de dialyse. Malgré le climat (chute abondante de neige ce soir là) peu de personne manquait à l'appel.

Nous avons le plaisir de compter dans notre équipe depuis novembre dernier, 2 infirmières et 1 infirmier qui ont été recrutés en France et qui travaillent avec nous en hémodialyse. Il est très intéressant de partager nos expériences communes et aussi différentes d'un pays à l'autre. Il s'agit de Louisa Khiri, Noëlle Raimond et Stéphane Kezelian.

Nous sommes à l'étape de procéder au début de l'implantation du logiciel de néphrologie ''Néphrocare" pour le mois de janvier.—Hélène Perron

CUSM

Juste un petit mot pour dire que dorénavant, 2 assistantes infirmières chef seront en poste pour l'Hôpital Général de Montréal soit : Alexandra Guignard et Rita Di Lella. Nous leurs souhaitons la bienvenue. De plus en dialyse péritonéale, la clientèle des centres Hôpital Générale de Montréal et l'Hôpital Royal Victoria sera suivie en partenariat et conjointement avec le CLSC.

Nous avons appris que Dr Keith œuvrant à l'Hôpital Royal Victoria nous quitte bientôt car il est transféré aux États-Unis.—Marie-Josée Stonely

CSSS d'Antoine-Labelle, Rivière-Rouge

Déjà presque 7 mois se sont écoulés depuis l'ouverture de l'unité satellite de la Rouge. Beaucoup a été fait si je résume en quelques lignes le message que Nicole Rondeau, chef de l'unité m'a fait parvenir dernièrement. Que ce soit au niveau cliniques, technologiques, humains ou éthiques, tous les efforts sont déployés afin d'atteindre les plus hauts standards de qualité. À ce compte, tous y gagnent autant la clientèle que le personnel qui gravite autour de celle-ci. L'esprit d'équipe semble la pierre angulaire de la réussite du déploiement de cette unité. Le tout repose sur les valeurs, le respect et le dialogue conformément au code d'éthique du CSSS d'Antoine-Labelle. La règle des 3 P favorise la réussite sociale et créé un climat de bonne entente soit : patience, persévérance et plaisir au travail. Bref, en ce début d'année, quoi souhaiter de plus que de poursuivre tout ce qui a été entrepris dans un continuum d'amélioration de soins et des services.

Rappel :

Colloque annuel de la SQN (Société Québécoise de Néphrologie) du 1 au 3 mai 2008 au Manoir St-Sauveur à St-Sauveur.

www.sqn.ca

Martine Leblanc, néphrologue
Présidente de la SQN
mleblanc.hmr@ssss.gouv.qc.ca

Sir Mortimer B. Davis Hôpital général juif de Montréal

Francine nous informe qu'actuellement l'énergie est concentrée sur l'orientationdes nouvelles infirmières. Nous maintenons, une bonne moyenne, soit sept dans les sept derniers mois. Nous allons donc bientôt maximiser la capacité du nouveau pavillon et ainsi rééquilibrer le taux d, occupation des deux unités. Ce changement d'organisation nous permettra de répondre de nouveau à la demande croissante de « visiteurs ». Une très belle année à tous. —Francine Manceau

Atlantic Region (Colleen Wile)

Greetings from the Atlantic region. The following outlines the Atlantic region in terms of membership and activities. Total membership is 96, with the following breakdown: Newfoundland 15, Nova Scotia 37, New Brunswick 44, and Prince Edward Island 3. Please encourage your colleagues to join the organization to partake of the benefits offered. CANNT Atlantic Regional Conference will be held June 6–7 at the UNBSJ campus. The theme for the conference will be "Ethics: What's the Problem".

St. John's, Newfoundland

- Buttonhole Research Study finished. Waiting for patient and staff questionnaires to be completed.
- Staff (and patients) continue to raise money to get all new chairs for our unit, the CHAIRity fundraiser.

Corner Brook, Newfoundland

- Inservice given on the new syringes for Eprex (safety syringes).
- Over the Christmas period, staff and patients dedicated the Christmas tree in support of the troops in Afghanistan. Staff and patients brought in photographs of family members who are currently in the armed forces or were in the past, right back to the First World War. The backdrop for the tree was camouflage netting and on this netting were photos of all the soldiers who have died in Afghanistan, and it was flagged with the Canadian and Newfoundland flags. The tree caused a lot of interest in the city and we ended up on the front page of the newspaper. The patients were given cards to sign for the troops and they were mailed. The patients really enjoyed getting together with the nurses for this project. We also won a prize in the hospital for the best non-traditional tree.

Charlottetown, Prince Edward Island

- Five staff attended the PD day in Dieppe, New Brunswick, "Giving PD its Rightful Place," sponsored by Baxter.

Cape Breton, Nova Scotia

- Four staff attended CANNT Winnipeg and found the conference very informative. Information was brought back and shared with staff.
- Promoting information on our CANNT bulletin board for CANNT 2008 in Quebec City.
- Our PD nurse and Renal Educator are training home care staff and long-term care staff to do peritoneal dialysis.
- LPNs are starting to needle.
- Have started using the buttonhole technique on one patient.
- Educator has started a theme bulletin board for each month. During that month, in-services will be held pertaining to the theme.
- One staff member has started her Masters while two other staff members are studying for their BSc in nursing.
- Two of our hemodialysis staff members are writing their certification exam in April.

Halifax/Dartmouth, Nova Scotia

- Evening education sessions continue approximately bi-monthly. These sessions are generally well-attended by between 30 and 40 participants.
- Main incentre hemodialysis unit is looking at initiating an exercise program for dialysis patients. Physio and physician support is now on board and the team is looking at purchasing some bikes.
- LPNs are maximizing their scope of practice and are now caring for the tunneled hemodialysis catheters in our stable predictable hemodialysis patients.
- "Changing the Way we Work", initiative looking at scopes of practice and scopes of employment to ensure the right person is doing the right job to best meet the needs of our current patient population, continues to progress.
- The Halifax centre presented two poster presentations at the national CANNT Conference in Winnipeg—one on Diabetic Foot Care and the other on Promoting Professional Competencies and Educational Development within a diverse renal program.
- One-day nephrology education days are planned for March 28 and April 1 to provide staff the opportunity for further nephrology-related education.
- Liverpool satellite site is expanding to a new unit within the same complex.
- Plans are underway to replace the Port Hawkesbury satellite site.

Moncton, New Brunswick

- Construction—expansion (double the capacity) is well underway for the satellite unit in Miramichi.
- Moncton will host Nephrology New Brunswick, April 25. For more details, contact Eliette Leger (eliettel@rrsb.nb.ca).
- Chantal Saumure and Robert Hache are helping the Quebec team in preparation for CANNT 2008.
- Karelle Robichaud was awarded the first excellence in practice award for a new graduate entering the profession from the Nurses Association of New Brunswick (NANB).
- Chantal Saumure has joined the Canadian Council on Health Services Accreditation as a visiting member.

Saint John, New Brunswick

- Five staff attended CANNT Winnipeg.
- Proposal for satellite in the St. Stephen area presented to Department of Health and Wellness.
- Hemodialysis unit received Award of Recognition of Infection Control for Low Rate of Transmission of Antibiotic Resistant Organisms (1.5% over last two years).
- Sherry MacPhee appointed to content editorial board of **Nurse One.**
- Program as is Atlantic Health Sciences Corporation (AHSC) preparing for accreditation in June 2008.
- Program involved in development of new electronic health record initiative of AHSC.

Région de l'Atlantique (Colleen Wile)

Meilleurs vœux de la région de l'Atlantique! Le présent compte rendu souligne la les activités de notre région. Le nombre total de membres est de 96, réparti comme suit : Terre-Neuve-et-Labrador 15; Nouvelle-Écosse 37; Nouveau-Brunswick 44 et Île-du-Prince-Édouard 3. Nous vous invitons à encourager vos collèges à adhérer à l'ACITN pour prendre part à ses activités et avantages. La réunion de l'ACITN pour la région de l'Atlantique aura lieu les 6 et 7 juin prochain sur le campus de l'Université du Nouveau-Brunswick à Saint John. Cette réunion se déroulera sous le thème « Éthique : C'est quoi le problème? »

St. John's, Terre-Neuve

- L'étude sur la technique de trou de bouton est terminée. Nous attendons que les patients et le personnel complètent et retournent les questionnaires.
- Les membres du personnel (et les patients) continue d'amasser de l'argent pour l'achat de nouveaux fauteuils de dialyse pour notre l'unité de dialyse dans le cadre de la campagne de financement, « CHAIRity ».

Corner Brook, Terre-Neuve

- Une formation sur place a été donnée sur les nouvelles seringues pour Eprex™ (seringues de sécurité).
- Pendant la période des Fêtes, le personnel et les patients ont dédié leur arbre de Noël en appui aux troupes en Afghanistan. Le personnel et les patients ont apporté des photos de

membres de leur famille qui font carrière dans les forces armées ou qui l'ont déjà fait, et ce, depuis la Première Guerre mondiale. L'arrière-plan de notre arbre de Noël était composé d'un filet de camouflage et sur ce filet nous avions déposé les photos de tous les soldats morts en Afghanistan, avec les drapeaux du Canada et de Terre-Neuve. Cet arbre a suscité beaucoup d'intérêt dans ville et a même fait la une du journal local. Les patients ont signé des cartes de vœux qui ont été expédiées aux troupes basées en Afghanistan. Les patients ont réellement pris plaisir à se réunir avec les infirmières pour mener ce projet. Nous avons également remporté le Prix du plus bel arbre non traditionnel de l'hôpital.

Charlottetown, Île-du-Prince-Édouard

- Cinq membres du personnel se sont rendus à Dieppe, au Nouveau-Brunswick pour participer à la Journée de la DPAC, commanditée par Baxter et intitulée « Donnons à la DPAC la place qui lui revient ».

Cape Breton, Nouvelle-Écosse

- Quatre membres du personnel ont assisté au congrès de l'ACITN à Winnipeg et l'ont trouvé très éducatif. Ils ont ramené beaucoup d'information et l'ont partagé avec le personnel.
- Nous utilisons le nouveau babillard à l'effigie de l'ACITN dans la promotion du congrès 2008.
- Notre infirmière de DPAC et l'éducatrice en néphrologie entraîne le personnel des soins à domicile et le personnel des soins de longue durée sur la dialyse péritonéale.
- Les I.A.A. peuvent maintenant donner des injections ou effectuer la ponction de la fistule.
- La technique du trou de bouton a débuté chez un patient.
- L'éducatrice a inauguré un tableau d'affichage thématique. Pour chaque mois, des séances de formation connexes au thème seront données sur place.
- Une infirmière est inscrite à la maîtrise et deux autres membres du personnel font des études de premier cycle en sciences infirmières.
- Deux membres du personnel en hémodialyse préparent leur examen de certification en avril.

Halifax/Dartmouth, Nouvelle-Écosse

- Les séances d'éducation en soirée continueront d'avoir lieu tous les deux mois. Ces séances sont généralement populaires, de 30 à 40 personnes y assistent.
- La direction de l'unité d'hémodialyse désire instaurer un programme d'exercices pour les patients dialysés. Nous avons le soutien médical et du physiothérapeute. L'équipe cherche à acquérir des bicyclettes stationnaires.
- Les I.A.A. maximisent leur champ d'activités et elles donnent maintenant les soins aux cathéters tunnellisés chez les patients stables et prévisibles en hémodialyse.
- Modifions la façon dont nous travaillons—il s'agit d'une initiative qui permet d'évaluer les champs de pratique des professionnels afin de s'assurer que la bonne personne accomplit la bonne tâche. Ceci nous permet de mieux

NOTICE BOARD

- Ottawa Supper Clubs—Contact Janet Graham, Nephrology Unit, Ottawa Hospital, **jgraham@ottawahospital.on.ca**
- March 13, 2008. World Kidney Day. Website: **www.worldkidneyday.org**
- March 15, 2008. Kidney Foundation of Canada. Deadline for Allied Health Fellowships and Scholarships. Contact: Coordinator, Research Grants and Awards, 1-800-361-7494, ext. 232, E-mail: **research@kidney.ca** Website: **www.kidney.ca**
- March 18–20, 2008. National Association of Nephrology Technicians/Technologists (NANT) 25th Annual Training Symposium, Riviera Hotel, Las Vegas, NV. Website: **www.nant.net**
- April 5, 2008. Exam date for CNeph(C) certification exam. Contact Canadian Nurses Association Certification Program, e-mail: **certification@cna-aiic.ca**. Website: **www.cna-aiic.ca**
- April 25, 2008. Néphrologie Nouveau-Brunswick/Nephrology New Brunswick. Moncton, NB. Delta Beauséjour. Pour de plus amples details communiquez avec/For more information, contact: Eliette Léger (506) 862-4641, courriel/e-mail: **eliettel@rrsb.nb.ca**
- April 27–30, 2008. American Nephrology Nurses Association (ANNA) 39th National Symposium, Philadelphia Marriott & PA Convention Center, Philadelphia, PA. Contact the ANNA National Office, 1-888-600-2662; e-mail: **anna@ajj.com**. Website: **www.annanurse.org**
- June 15, 2008. CANNT Awards, Bursaries and Grant Application Deadline. For more information, contact Debbie Maure at the CANNT National Office (705) 720-2819, e-mail **cannt@cannt.ca**, or visit our website at **www.cannt.ca**
- September 6–9, 2008. European Dialysis and Transplant Nurses Association/European Renal Care Association (EDTNA/ERCA) 37th International Conference, Prague, Czech Republic. Website: **www.edtnaerca.org**
- September 17, 2008. Nephrology Health Care Professionals Day
- October 15, 2008. Kidney Foundation of Canada. Deadline for Allied Health Research Grants. Contact: Coordinator, Research Grants and Awards, e-mail: **research@kidney.ca**. Website: **www.kidney.ca**
- October 23–26, 2008. CANNT 40th National Symposium. Quebec Convention Centre—Quebec Hilton Hotel, Quebec City, Quebec. Conference Planner: Heather Reid: e-mail: **hreid@innovcc.ca**. Website: **www.cannt.ca**

répondre aux besoins de notre population actuelle de patients.
- Le centre de dialyse de Halifax a présenté deux affiches scientifiques au Congrès annuel de l'ACITN à Winnipeg : une affiche portait sur les soins des pieds chez les patients diabétiques et une autre sur la promotion des compétences professionnelles et le perfectionnement de l'enseignement au sein d'un programme de néphrologie diversifié.
- Des Journées de formation continue en néphrologie sont prévues les 28 mars et 1er avril.
- Le centre satellite de Liverpool prend de l'expansion dans un autre section de l'institution.
- Nous sommes à préparer des plans pour reloger le centre satellite de Port Hawkesbury.

Moncton, Nouveau-Brunswick
- Les travaux de construction et d'agrandissement (le double de la capacité) vont bon train pour le centre satellite à Miramichi.
- Moncton sera l'hôte de Néphrologique Nouveau Brunswick qui aura lieu le 25 avril prochain. Pour de plus amples renseignements communiquez avec Eliette Leger (eliettel@rrsb.nb.ca).
- Chantal Saumure et Robert Hache se joignent à l'équipe de Québec pour mettre l'épaule à la roue en prévision du Congrès annuel de l'ACITN de 2008.
- Karelle Robichaud est la première récipiendaire du Prix de distinction d'une infirmière débutante de l'Association des infirmières et infirmiers du Nouveau-Brunswick (AIINB).
- Chantal Saumure s'est jointe au Conseil canadien d'agrément des services de santé (CSSA) à titre de membres visiteurs.

Saint John, Nouveau-Brunswick
- Cinq membres du personnel ont participé au Congrès de l'ACITN à Winnipeg.
- Une proposition pour un centre satellite dans la région de St. Stephen a été déposée au ministère de la Santé et du Mieux-être.
- L'unité d'hémodialyse a reçu le Prix de reconnaissance en préventions des infections pour son faible taux de transmission d'organismes résistants aux antibiotiques (1,5 % pour les deux dernières années).
- Sherry MacPhee a été nommée au Comité de rédaction de « Nurse One », nouveau portail Web de l'AIIC.
- Le programme se prépare à la visite du Conseil canadien d'agrément des services de santé en juin 2008.
- De nouvelles initiatives dans le développement de la documentation électronique sont en cour.

Technical Report (Marc Héroux)
- The technical standards for CANNT get a bi-annual review by members of CANNT under the direction of the technologist VP. This year, the emphasis will be on the creation of a home dialysis segment of the standards.
- Technologists have created a work group for the technical part of the Nephrology Healthcare Professionals Day.
- Canadian Standards Association (CSA) Extracorporeal Circulation Technical Committee (TC) agreed that the TC and the Dialysis Technical Subcommittee members' names should be added to the Standards Council of Canada website for CAC/ISO/TC150/SC2 — Cardiovascular Implants. This is so members can be advised of international dialysis standards work going on at **ISO/TC150/SC2/WG5** that deals with *renal replacement, detoxification and apheresis.*

Thunder Bay Regional Health Sciences Centre—Mark Kusznier, CET

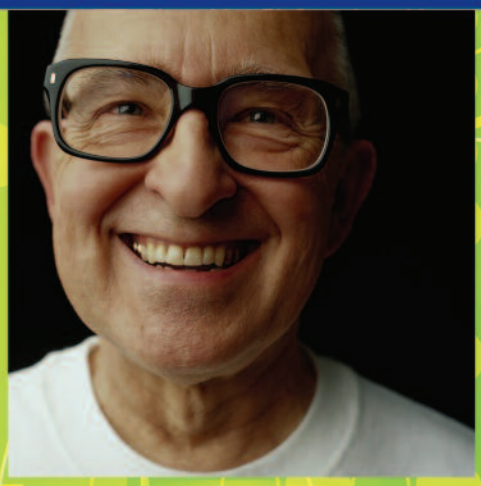
Our new Home Hemodialysis Program is now in full swing, with the hiring of our training nurses and the building of our training facilities started the end of January. We held a vendor demonstration day in December, where we were able to see all the different machines and water systems, listen to the presentations of each supplier and what they could offer us in service, training, and support. After many hours of discussion, we finally made our choice of which vendor we will be going with. It was a tough decision to make, especially when there are so many good companies out there offering excellent service and solid products.

Toronto Sick Kids Hospital—Mukesh Gajari
- New equipment has replaced some of the older dialysis machines from our fleet.

Rapport technique (Marc Héroux)
- Les normes de pratique technique de l'ACITN sont révisées tous les deux ans par les membres sous la direction du vice-président des technologues. Cette année, nous nous concentrerons sur la création d'un segment des normes consacré à la dialyse à domicile.
- Des technologues ont formé un groupe de travail pour prendre en charge la partie technique de la Journée des professionnels de la santé en néphrologie.
- Le Comité technique sur la circulation extracorporelle de l'Association canadienne de normalisation (CSA) a convenu d'ajouter le nom des membres du Comité technique et du Sous-comité technique de dialyse sur le site Web du Conseil canadien des normes pour les implants cardiovasculaires—CAC/ISO/TC150/SC2. Ainsi, les membres sont informés que des travaux de normalisation internationale en matière de dialyse ont cours, **ISO/TC150/SC2/WG5**, et qu'ils portent sur la *remplacement rénal, la détoxification et l'aphérèse.*

Thunder Bay Regional Health Sciences Centre—Mark Kusznier, T.A.I.
- Notre nouveau Programme d'hémodialyse à domicile fonctionne à plein régime, grâce à l'embauche des infirmières-enseignantes et à la construction de nos installations de formation dont les travaux doivent commencer à la fin de janvier. Nous avons tenu une Journée des fournisseurs en décembre au cours de laquelle nous avons été en mesure de voir les différents appareils d'hémodialyse et systèmes de traitement d'eau, d'assister aux présentations de chaque fournisseur et de connaître ce qu'ils pourraient nous offrir en matière de service, de formation et de soutien. Après plusieurs heures de discussion, nous avons finalement choisi notre fournisseur. Ce fut une décision difficile à prendre, notamment parce qu'il y a d'excellents produits et services.

Toronto Sick Kids Hospital—Mukesh Gajari



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Les gens étant au cœur de nos préoccupations, nous améliorons la qualité de vie des patients, de leur famille et des aidants. L'engagement de nos employés nous permet de faire la différence en matière de santé pour les Canadiens et leurs communautés.

Nous sommes fiers de nous associer à l'Association canadienne des infirmières et infirmiers et des technologues de néphrologie.

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Your board in action

The fall board meeting was held October 23 to 25 in Winnipeg, Manitoba. The purpose of this article is to keep you informed of the activities of your organization. The highlights from the meeting are as follows:

Membership

- The membership package has been revised with a new format and new look that will allow for updating on a regular basis and lower postage costs. These were available at the CANNT booth at the fall symposium in Winnipeg, Manitoba.
- A new format was trialed this year for mass mail-outs. We received many positive comments from members regarding this format and we will continue to do this to keep members informed of activities.
- Membership drives to encourage more membership were held during the year and were promoted on the web, e-mail and an insert on the cover of the journal.

Finances

- The annual symposium continues to be the major revenue generator that supports activities throughout the year. This was a very financially successful year due to the following revenues: conference in London, Ontario, October 2006, the boutique and internet sales and increased membership.
- We want to thank our corporate sponsors who continue to support activities such as the conference symposium, journal, website, awards, bursary and new initiatives.
- The regional funds were consolidated into one account to enable a closer examination of the total balance and total association equity.
- CANNT continues to be in good financial standing.

Strategic planning

- In preparation for strategic planning, some past members of the board of directors were asked for their input regarding strengths, weaknesses and opportunities for growth.
- A consultant, Gerry Couture, was hired to give a presentation to assist the board in strategic planning.
- The strategic plan is in development and will be available to members in the fall of 2008.

Journal

- The journal is a peer-reviewed journal that is published quarterly and continues to be a resource for nephrology professionals.
- Congratulations to Gillian Brunier on the outstanding achievement of being the journal editor for 10 years. Gillian's commitment was acknowledged at the annual general meeting in Winnipeg, Manitoba.
- Jennifer Donnan and Séadna Ledger were the recipients of the Journal Award for their article entitled: "An update on the treatment and management of diabetic peripheral neuropathy."

Website

- The website continues to be the most up-to-date source for communication.
- Discussions occurred at the board meetings about growing and revising the website. Further discussions will occur during the spring board meeting on this topic.

Communication

Liaisons

- The role of the unit liaison continues to be an important activity.
- The VPs have done a great job and the number of liaisons increased this year.
- All liaisons received a CANNT corkboard to post in their units to assist them in promoting CANNT membership and activities.

Refined Clinical Practice Groups (RCPG)

- This is a new initiative from the board with the goal of providing different clinical interests groups to network, forums for discussion, sharing and developing policy and guidelines.
- Under the guidance of Jan Baker, the Renal Educators Network (REN), which includes the Clinical Educators Network (CEN) and Early Renal Insufficiency Educators (ERIE), became our first RCPG this year. The first face-to-face meeting was held during the annual symposium in October in Winnipeg, Manitoba. See the new REN webpage on the CANNT website.
- A pamphlet was also developed informing members of the RCPGs. This pamphlet was distributed at the CANNT booth at the annual conference.
- We are currently looking for individuals to lead these groups. Please contact the CANNT office if you are interested.

Toll free telephone number

- We are currently evaluating the possibility to have a toll free telephone number.

CANNT office operations

- Some of the our office equipment is out of date and we will be investigating upgrading some of the equipment.
- The performance appraisal for Mrs. Debbie Maure, Administrative Assistant, has been completed and a renewal of the contract was completed.

Standards of Practice

- Volunteers were requested and a group was formed to begin to review the technical standards.
- Marsha Wood, a CANNT member from Halifax, was hired to be the project leader for the review of the Nursing Standards. Based on feedback we received from members, the format of the standards will be revised. This work is well underway and the standards will be available in 2008.

Awards of excellence and bursaries

- Congratulations to the 2006–2007 award winners:
  - Franca Tantalo Bursary: Sherri Kensall
  - Frances Boutilier Bursary: Colleen Wile
  - Award of Excellence in Clinical Practice: Janet Love
  - Award of Excellence in Administration/Leadership: Chantal Saumure
- We encourage members to apply for these awards. The next deadline is June 15, 2008.
- The board decided to establish a new award for 2008, which will be an Award of Excellence for a Novice Nephrology Nurse.

Research grant

- The research grant was awarded to Lucia Costantini and Heather Beanlands for their study entitled "Measuring the self-care ability and behaviours of people on dialysis."

Nominations committee

- A call for nominations was sent to the membership for president-elect, VP Quebec, VP eastern, and website coordinator/treasurer. These individuals were elected by acclamation after meeting the required criteria. The new members of the CANNT 2007-2008 board are Janet Baker, President-Elect, Lisette Lafrenière, VP Quebec, Colleen Wile, VP Atlantic, and Susan Placko, Website Coordinator/Treasurer.

Canadian Society of Nephrology (CSN) Krescent Program

- The board of directors agreed to support this initiative and will be giving an annual financial contribution.

Canadian Nurses Association (CNA) Certification

- The study guide is currently being updated by CNA and will be available in 2008.
- Discussions occurred regarding providing a prep course for nephrology nurses to assist them in preparations for the CNeph(C) exam writing.

CANNT's 40th anniversary in 2008 celebrations

- A group was formed composed of CANNT members who volunteered to plan for the celebrations. This group is under the leadership of Faye Clark. Faye has spent many hours compiling our history, award winners, journal history, past board members and conferences over the last 40 years. Celebrations will occur at the annual symposium in Quebec City, as well as dedication of the July–September edition of the journal to the past and future of nephrology in Canada.

Nephrology Health Care Professionals Day: September 19, 2007

- This was the first annual Nephrology Health Care Professionals Day. This was initiated by CANNT and held in collaboration with the Canadian Association of Nephrology Social Workers (CANSW), Renal Pharmacists Network (RPN) and the Association of Nephrology Dieticians (AND).
- The theme this year was Celebrating Working Together.
- Celebrations occurred all across Canada. Stories of how nephrology programs recognized their achievements were posted on the website.

CANNT Symposium 2008

- This year's conference will be held in Quebec City, October 23–26. The theme is *Our Past Turned Toward our Future*. This theme reflects the local history, with Quebec City having the first renal unit in Canada, the 400th celebration of Quebec City, CNA's 100th celebration and CANNT's 40th anniversary.
- Tentative plans are underway for CANNT 2009 to be held in Saint John, New Brunswick, October 15–18, 2009.

It has been a very busy, but productive year for CANNT and your CANNT board has worked hard to advance CANNT and meet the needs of members. CANNT is your organization and we encourage you to get involved. Our next board meeting will be in the spring of 2008. Please contact me if you have any questions.

Respectfully submitted,
Lori Harwood, RN, MSc, CNeph(C)
Past President

Votre conseil en action

La réunion automnale du Conseil d'administration (C.A.) de l'ACITN s'est déroulée du 23 au 25 octobre dernier à Winnipeg, au Manitoba. Le présent article consiste à vous informer sur les activités et les points saillants de cette rencontre :

Adhésion

- La trousse d'adhésion des nouveaux membres à été révisée et compte aussi un nouveau format plus économique et facile de porter des modifications. Cette nouvelle trousse était disponible au stand de l'ACITN lors du dernier congrès à Winnipeg, au Manitoba.
- Un nouveau format de publipostage a aussi été mis à l'épreuve. Nous avons reçu de nombreux commentaires constructifs et nous continuerons de l'utiliser pour vous tenir au courant des activités de l'ACITN.
- Plusieurs campagnes de sollicitation par l'intermédiaire de moyens de communication variées ont été entreprises tout au long de l'année afin d'accroître notre effectif.

Finances

- Le congrès annuel constitue toujours notre principale source de revenus. L'exercice de 2007 a été couronné de succès sur le plan financier grâce aux revenus provenant du congrès en octobre 2006, à London, en Ontario, des ventes de la boutique de l'ACITN, des ventes par Internet et des cotisations d'un plus grand nombre de membres.
- Nous tenons à remercier nos partenaires de l'industrie qui continuent d'appuyer et d'encourager les nouvelles initiatives de l'ACITN ainsi que ses activités courantes, telles que : congrès, symposium, journal, site Web, prix, bourses, etc.
- Les fonds régionaux ont été consolidé un seul compte afin d'exercer une vérification plus étroite des transactions l'ensemble des capitaux propres de l'Association.
- L'ACITN est en bonne situation financière.

Planification stratégique

- En vue de la planification stratégique, nous avons demandé à certains membres, qui ont déjà fait partie du C.A., leurs commentaires sur les forces et les faiblesses de l'ACITN ainsi que sur ses occasions de croissance.
- Nous avons retenu les services d'un conseiller, Gerry Couture, qui a donné une présentation afin d'aider le C.A. dans son processus de planification stratégique.
- Le plan stratégique sera présenté à l'automne 2008.

Journal

- Publié trimestriellement, le Journal, est une publication appréciée et représente une source importante d'information pour les professionnels en néphrologie.
- Félicitations à Gillian Brunier pour son travail exceptionnel en qualité de rédactrice en chef depuis les 10 dernières années. Nous avons souligné son dévouement profond à l'ACITN lors de l'Assemblée générale annuelle qui a eu lieu à Winnipeg, au Manitoba.
- Mmes Jennifer Donnan et Seadna Ledger ont reçu le Prix d'excellence du Journal pour leur article intitulé : « An update on the treatment and management of diabetic peripheral neuropathy ».

Site Web

- Le site Web continue d'être la source d'information la plus à jour pour les communications de l'ACITN.
- Nous avons discuté à maintes reprises des possibilités d'amélioration continue du site. Ce point sera porté à l'ordre du jour de la prochaine réunion du C.A. qui aura lieu au printemps.

Communications

Coordination des activités

- Le rôle d'agent de liaison au sein des unités de dialyse demeure une activité importante.
- Les vice-présidents ont fait un travail exemplaire et le nombre d'agents de liaison a augmenté cette année.
- Chaque agent de liaison a reçu un tableau en liège à l'effigie de l'association dans le but de communiquer les activités en plus de promouvoir l'adhésion à l'ACITN.

Forums sur la pratique clinique

- Il s'agit d'une nouvelle initiative qui vise à former des groupes clinique d'intérêt commun afin de réseauter, de participer à des forums de discussion, d'échanger et d'élaborer des politiques et des lignes directrices, etc.
- Sous la direction de Jan Baker, le Renal Educators Network (REN), qui inclut notamment le Clinical Educators Network (CEN) et les Early Renal Insufficiency Educators (ERIE), a été notre premier forum durant le congrès annuel en octobre dernier. Nous vous invitons à consulter la nouvelle page REN sur le site de l'ACITN.
- Un dépliant a aussi été préparé pour informer les membres de la création de tels forums. Ce dépliant a été distribué au stand de l'ACITN lors du congrès annuel.
- Nous sommes actuellement à la recherche de personnes pour diriger ces forums. Si vous êtes intéressé, veuillez communiquer avec le secrétariat de l'ACITN.

Ligne sans frais

- Nous étudions présentement la demande d'instaurer une ligne télé-

phonique sans frais.

Services administratifs

- Une partie du matériel de bureau chef est désuète. Nous allons évaluer la possibilité de le remplacer.
- L'évaluation de rendement de Madame Debbie Maure, Administratrice adjointe est complétée ainsi que le renouvellement du contrat de travail.

Normes de la pratique

- Nous avons fait appel à des bénévoles pour former l'équipe chargée de la révision des normes de pratique technique.
- Marsha Wood, membre de l'ACITN à Halifax, a été nommée chef de projet pour la mise à jour des normes de pratique infirmière. Conformément aux commentaires de nos membres, nous réviserons également le format de ces normes. Ce travail va bon train et les nouvelles normes seront publiées en 2008.

Prix d'excellence et bourses

- Félicitations à tous les lauréats de 2006-2007 :
  - Bourse Franca Tantalo—Sherri Kensall
  - Bourse Frances Boutilier—Colleen Wile
  - Prix d'excellence en pratique clinique—Janet Love
  - Prix d'excellence en administration/leadership—Chantal Samure
- N'hésitez pas à soumettre des candidatures à ces prix et à ces bourses. La date limite est le **15 juin 2008.**
- Le C.A. a convenu de créer un nouveau prix en 2008, à savoir le Prix d'excellence pour une infirmière débutante en néphrologie.

Subvention de recherche

- La subvention de recherche a été accordée à Lucia Costantini et à Heather Beanlands pour leur étude intitulée « Measuring the self-care ability and behaviours of people on dialysis. »

Comité des mises en candidature

- Un appel de mises en candidature avait été envoyé aux membres pour l'élection des postes suivants : président(e) désigné(e), vice-président(e) pour le Québec, vice-président(e) pour l'Atlantique et coordonnateur (trice) du site Web/trésorier (ère). Ces personnes ont été élues par acclamation, car aucune elles rencontraient les critères d'éligibilité et aucune autres candidatures n'a été reçues.

Le nouveau C.A. pour 2007–2008 compte maintenant: Janet Baker, présidente désignée, Lisette Lafrenière, vice-présidente pour le Québec, Colleen Wile, vice-présidente pour l'Atlantique et Susan Placko, coordonnatrice du site Web/trésorière.

Programme Krescent (Kidney Research Scientist Core Education and National Training) de la Société canadienne de néphrologie (SCN)

- Le C.A. a accepté d'appuyer cette initiative et offrira annuellement un support fianncier.

Certification en néphrologie de l'Association des infirmières et infirmiers du Canada (AIIC)

- Le guide d'étude est actuellement mis à jour par l'AIIC et sera disponible en 2008.
- Des discussions ont eu lieu sur la possibilité d'offrir un cours préparatoire à l'intention des infirmières et infirmiers en néphrologie afin de les aider dans leur préparation pour passer l'examen de certification de CNéph(C).

Célébrations du 40ième anniversaire

- Des membres de l'ACITN se sont portés volontaires pour former le groupe qui organisera les célébrations du 40e anniversaire. Ce groupe travaillera sous la direction de Faye Clark, qui a passé de nombreuses heures à compiler les faits historiques marquants de l'ACITN ainsi qu'une rétrospective des lauréats, du journal, des C.A., des congrès et des événements qui ont façonné les 40 dernières années. Les célébrations auront lieu durant le congrès annuel. Le numéro de juillet-septembre du Journal sera consacré au passé et à l'avenir de la pratique néphrologique au Canada.

Journée de reconnaissance des professionnels de la santé en néphrologie

- Le 19 septembre dernier, nous avons célébré la première Journée de reconnaissance des professionnels de la santé en néphrologie. Cette première initiative s'est déroulé en collaboration avec la Canadian Association of Nephrology Social Workers (CANSW), le Renal Pharmacists Network (RPN) et l'Association of Nephrology Dieticians (AND).
- Le thème cette année est : Célébrons notre travail d'équipe/Celebrating Working Together.
- Des célébrations ont eu lieu partout au Canada. Des articles soulignant les belles réussites de différents programmes de néphrologie ont été publiés sur le site Web.

Congrès annuel de l'ACITN 2008

- Le congrès annuel aura lieu dans la ville de Québec, du 23 au 26 octobre. Le thème retenu est : Notre passé tourné vers l'avenir/Our Past Turned Toward our Future. Celui-ci reflète notre lien historique particulier avec le programme de néphrologie de l'Hotel Dieu de Québec, qui a accueilli la première unité de dialyse au Canada. L'année 2008 marque aussi, le 400e anniversaire de la Ville de Québec, le 100e anniversaire de l'AIIC.
- Des plans à l'état de projet sont en cours pour la tenue du congrès annuel de l'ACITN de 2009 à Saint John, au Nouveau-Brunswick, du 15 au 18 octobre 2009.

L'exercice de 2007 a été très occupé, mais aussi très productif pour l'ACITN et votre C.A. a travaillé d'arrache-pied pour faire avancer l'ACITN et répondre aux besoins de ses membres. L'ACITN est votre association et nous vous encourageons à participer à ses comités et activités. Notre prochaine assemblée se tiendra au printemps 2008. Pour toute question, n'hésitez pas à communiquer avec moi.

Le tout respectueusement soumis,
Lori Harwood, inf. aut.,
M.Sc.Inf., CNéph(C)

Nephrology certification update

The Canadian Nurses Association (CNA) certification program is important to nurses, the nursing profession, employers and the general public. By achieving CNA certification, nurses commit to a national standard of professional competence that demonstrates a comprehensive understanding of their specialty and a commitment to continuing competence. Specialty certification is a voluntary process reserved for nurses who meet rigorous practice, continuous learning and testing requirements.

As of December 2006, 1,019 nephrology nurses held valid CNA certification in nephrology (see Table One). CANNT would like to congratulate the successful candidates from 2007 who will add to this total. CANNT would also like to congratulate all those nurses who chose to recertify this past year. Maintaining certification shows the commitment that nephrology nurses have to our specialty.

The Canadian Nurses Association will be administering the 2008 CNA certification exam on April 5, 2008. The certification credential is part of a respected national certification program, which is developed by Canadian nurses for Canadian nurses.

CNA offers a document called **Build on What You Know: A Study Group Manual for Nurses Preparing for CNA Certification Exams.** This manual includes tips for study group facilitators and participants, suggested references and other information. The links below will take you to this document and other valuable resources to help with the preparation for the exam: http://cna-aiic.ca/CNA/nursing/certification/apply/studygroups/default_e.aspx

CNA has assembled a distinguished list of certified nurses who are willing to act as mentors for those nurses who wish for support or assistance with certification exams. A list of mentors can be found below or by following the link: http://cna-aiic.ca/CNA/nursing/certification/apply/mentors/default_e.aspx

British Columbia
Richard Luscombe,
RN, CNeph(C), BSN
105-1620 Barclay Street
Vancouver, BC V6B 1A1
Tel: (604) 682-1525
E-mail:
rluscombe@providencehealth.bc.ca

Table One: Number of RNs with valid CNA certification by year and specialty, 2002–2006

	2002	2003	2004	2005	2006
Cardiovascular	298	415	546	660	713
Community Health	N/A	N/A	N/A	N/A	148
Critical Care	1,126	1,154	1,235	1,263	1,223
Critical Care—Pediatrics	N/A	34	46	61	94
Emergency	1,233	1,292	1,305	1,353	1,307
Gastroenterology	N/A	N/A	87	147	171
Gerontology	1,180	1,411	1,628	1,822	1,937
Hospice and Palliative Care	N/A	N/A	491	756	916
Nephrology	**828**	**877**	**921**	**963**	**1,019**
Neuroscience	171	163	192	207	223
Occupational Health	1,013	1,000	988	952	926
Oncology	1,028	1,081	1,137	1,231	1,332
Orthopaedic	N/A	N/A	N/A	N/A	73
Perinatal	414	488	578	619	621
Perioperative	1,845	1,772	1,777	1,672	1,585
Psychiatric—Mental Health	1,646	1,687	1,763	1,761	1,729
Rehabilitation	N/A	N/A	N/A	N/A	71
Total	10,782	11,374	12,694	13,467	14,088

N/A: Not applicable since the specialty certification was not available at the time. Source: Canadian Nurses Association, Department of Regulatory Policy

Alberta
Robert B. Huizinga,
RN, NNC, MSc(Epi), CNeph(C)
Director, Clinical Research
Isotechnika Inc.
2100 College Plaza
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Tel: (780) 487-1600 ext 223
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Saskatchewan
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E-mail: arlette.desranleau@fmc-na.com

New Brunswick
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Saint John, NB E2M 4M2
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E-mail: pricejar@nbnet.nb.ca

Nova Scotia
Colleen Wile, RN, CNeph(C)
Rm 248A- 6 West-Dickson Bldg
1278 Tower Road
Halifax, NS B3H 2Y9
Tel: (902) 473-5868
E-mail: colleend.wile@cdha.nshealth.ca

Financial assistance is offered through most hospitals or provincial licensing bodies to help with the cost of writing the exam. The Canadian Nurses Foundation also offers financial awards to two nurses in each specialty area to cover the certification fees. In addition, CANNT also offers the ISPD bursary to assist with the cost of certification or re-certification.

Applications for the Canadian Nurses Foundation award can be found at: www.canadiannursesfoundation.com/certification.htm

Application for the CANNT ISPD bursary can be found at: http://www.cannt.ca/awards/cannt

For more information on Nephrology Certification through CNA visit their website at: http://cna-aiic.ca/CNA/nursing/certification/default_e.aspx

Our Past 1968 TURNED TOWARD Our Future 2008

40th Anniversary

Quebec Convention Centre
Quebec Hilton Hotel

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

Quebec City
Quebec

October 23 - 26 2008

Call For ABSTRACTS

*Abstracts are currently being accepted for ORAL and POSTER presentations for **CANNT 2008**, the annual national meeting of the Canadian Association of Nephrology Nurses and Technologists, to be held **October 23 - 26, 2008** at the **Quebec Convention Centre**, **Quebec City**. Topics of interest may include: clinical research, innovative projects and solutions, ethics, case presentations and clinical reviews. All abstract submissions must be evidence-based.*

CONFERENCE THEME:

The theme for CANNT 2008 is **"OUR PAST TURNED TOWARD OUR FUTURE"**. In keeping with the conference theme, abstract submissions should demonstrate leading edge nephrology topics, appropriate for the novice through to the advanced practice professionals. Please consult the sidebar for possible areas of interest.

ABSTRACT SUBMISSION GUIDELINES - Deadline: April 1, 2008

All abstracts must be submitted via e-mail (hreid@innovcc.ca) as an attachment in Word or WordPerfect

Submissions must include the following:

Abstract Title
- must accurately reflect the content of the presentation

Abstract Text
- should be no longer than 250 words (font: Times New Roman 12 point)
- provide author information on a separate page
- should be as informative as possible

If **research-based**, should include:
- purpose of study
- methods
- results
- conclusions
- implications for nephrology care

If **practice/education-based**, should include:
- purpose of the project
- description
- evaluation/outcomes
- implications for nephrology practice/education

- define **all abbreviations** the first time they appear in the abstract
- use only the **generic** names of drugs
- **do not identify companies and/or products in the body or title of the abstract**

Modes of Dialysis
Pathophysiology
Pediatrics
Pharmacology
Education
Leadership
Transplantation
Technology
Chronic kidney disease
Psychosocial
Advance directives
Nutrition
Infection control
Vascular access
Professional development
Ethics
Professional practice
Research
Disaster planning

PRESENTATION INFORMATION: (provided on separate page)

- identify preferred format of presentation (ORAL or POSTER)
- full names and credentials of authors
- contact information for first author must include: full name, e-mail address, fax number, mailing address with postal code, home and work telephone numbers
- identify preferred audiovisual requirements (PC Viewer for Powerpoint or Slides)

IMPORTANT NOTES:

Only **COMPLETE** submissions received by **Tuesday, April 1, 2008** will be considered.
All correspondence will be with the first author only.
Acceptance of abstract does not waive attendance fees (registration, transportation, accommodations).
Notification regarding selection decisions will be provided by Thursday, May 1, 2008.
Should the abstract be selected for presentation, the author(s) authorize(s) the publication of the abstract submitted for publication in the CANNT Journal.
The presentation shall not make comparison to companies or products for any purposes of product marketing, nor will topics or materials used discredit companies or products.
The abstract should make full disclosure of corporate funding sources.
Abstracts not in the required format will be returned to the author for revision.
The language of abstract submission would be the language of presentation, if selected.

FORWARD ABSTRACTS TO:

Quebec City 2008

MAIL: **CANNT 2008 ABSTRACTS**
Innovative Conferences & Communications
P.O. Box 319
59 Millmanor Place
Delaware, Ontario, Canada
N0L 1E0

E-MAIL: hreid@innovcc.ca (with file attached)

Notre passé
1968

TOURNÉ VERS

l'avenir
2008

40ième Anniversaire

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

Centre des Congrès de Québec
Hôtel Hilton Québec

Québec

23 au 26 octobre 2008

Demande de COMMUNICATIONS

*Nous acceptions présentement pour des présentations ORALES et des SÉANCES D'AFFICHAGE pour **CANNT/ACITN 2008**, la réunion nationale annuelle de l'Association canadienne des infirmières/iers et technologues en néphrologie, qui se déroulera du **23 au 26 octobre 2008** au **Centre des Congrès de Québec, à Québec**. Les sujets d'intérêts peuvent comprendre : la recherche clinique, les solutions et les projets innovateurs, l'éthique, la présentation de cas et les examens cliniques. Toutes les communications présentées doivent être basées des résultats cliniques et scientifiques.*

THÈME DE LA CONFÉRENCE :

Le thème de CANNT/ACITN 2008 est « **NOTRE PASSÉ TOURNÉ VERS L'AVENIR** ». Conformément au thème de la conférence, les communications présentées doivent toucher des sujets de pointe en néphrologie, appropriés aux novices comm aux experts. Veuillez consulter l'encadré pour les domaines d'intérêt possibles.

LIGNES DIRECTRICES POUR LA PRÉSENTATION DES COMMUNICATIONS - ÉCHÉANCE : 1er Avril 2008

Toutes les communications doivent être présentées par courriel à l'adresse suivante : hreid@innovcc.ca avec pièce jointe en format Word™ ou WordPerfect™.

Les communications doivent comprendre les éléments suivants :

Titre de la communication
- doit refléter avec exactitude le contenu de la présentation;

Corps de la communication
- texte avec un maximum de 250 mots (caractère : Times New Roman, 12 points);
- fournir les renseignements sur l'auteur sur une page séparée;
- doit être le plus informatif possible;

si elle est **axée sur la recherche**,
- l'objet de l'étude;
- la méthodologie;
- les résultats;
- les conclusions;
- les implications pour les soins en néphrologie;

si elle est **axée sur la pratique/l'éducation**, elle doit comprendre :
- but du projet;
- la description;
- l'évaluation/les résultats;
- les implications pour la pratique et l'éducation en néphrologie;

- définir **toutes les abréviations** dans le texte;
- utiliser uniquement les noms **génériques** des médicaments;
- **ne pas identifier de compagnie ou de produit dans le titre ou le contenu de la communication**.

RENSEIGNEMENTS SUR LA PRÉSENTATION : (fournis sur une page séparée)

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Post-dialysis "pre-dialysis" care: The cart before the horse — Advanced practice nurse intervention and impact on modality selection

By Diane Watson, RN, MSc, CNeph(C)

Abstract

Most institutions with dialysis programs have developed pre-dialysis clinics, which provide education and medical management leading up to the need for dialysis or transplantation. Another large group of individuals start dialysis acutely, for a variety of reasons, and are often started emergently in hospital with little or no preparation or education for dialysis. Historically, a vast majority of this group of patients in our institution remained on incentre hemodialysis. The Division of Nephrology at the University Health Network (UHN), a large teaching hospital in Toronto, Ontario, developed a program by which a consulting advanced practice nurse (cAPN) intervened with these individuals starting dialysis emergently, with the goal of encouraging home dialysis. In the first 26 months of this role, the percentage of patients who started dialysis acutely and who stayed on incentre hemodialysis (HD) decreased from 87% to 33%, and the percentage who chose home dialysis increased from 13% to 67%.

Key words: dialysis modality, dialysis education, home dialysis, emergent hemodialysis

Background

Developing chronic kidney disease (CKD) and requiring dialysis or transplantation can be devastating to individuals. Approximately 18,000 Canadians are on some form of dialysis, with the numbers increasing exponentially (CORR, 2002). Individuals with CKD enter the nephrology "system" in a variety of ways, such as through referrals from GPs and other subspecialties. The advent of formalized pre-dialysis care clinics has been shown to extend the wellness of these individuals, as well as slow the progression of renal disease, which, in turn, extends the time until renal replacement therapy is required (McLaughlin et al., 2001). Pre-dialysis education programs have also resulted in a high percentage of individuals selecting home and self-care modalities of renal replacement therapy (Goovaerts, Jadou, & Goffin, 2005; Manns et al., 2005).

Unfortunately, a significant number of individuals are not identified at an early stage of CKD, present to hospitals with advanced renal failure, or develop renal failure secondary to another medical problem while in hospital, and require urgent renal replacement therapy. It has been recognized that late referral (defined as requiring dialysis less than four months following first referral to a nephrologist) is associated with poor pre-end stage renal disease (ESRD) care (Arora, 1999). These individuals are more likely to have abnormal blood values related to renal failure, such as lower serum albumin, higher phosphate, lower calcium, lower hemoglobin, and higher parathyroid hormone (PTH) levels (Dogan et al., 2005). They are also less likely to be on erythropoiesis-stimulating agents (ESAs), phosphate binders, and have higher hemodialysis central venous catheter use (Stack, 2003). Additionally, this group of patients, according to a U.S. study, had 50% excess mortality in the first year of dialysis (McLaughlin et al., 2001). It is postulated that approximately 30% to 50% of patients starting dialysis are in this late referral group.

The main strategy for managing new nephrology patients at the University Health Network (UHN) in Toronto, Ontario, has been through our renal management clinic, which started in 2000, and follows those individuals with known CKD pre-dialysis. Through this multidisciplinary clinic, individuals have their pre-dialysis care managed, including education and preparation for dialysis, as well as their medical care, dietary maintenance and social work interventions. The clinic is a resounding success, and can boast an excellent rate of home dialysis (74.6%) when selecting a dialysis modality. This differs dramatically from the group of individuals who have had either late referral or de novo renal failure requiring urgent initiation of dialysis in hospital.

This latter group has been a major focus for the UHN Division of Nephrology, as it has been estimated that approximately 50% of our dialysis population comes from this group. These individuals, who have emergent, or so-called "crash starts" on dialysis, do not have the advantage of preparation for dialysis. Consequently, they have not been educated regarding dialysis modality, dialysis access, home dialysis, or lifestyle changes that may be carried out. These people are generally considerably more ill, and have often required an urgent hemodialysis (HD) catheter insertion to begin renal replacement therapy, often some form of continuous renal replacement therapy (CRRT) or intermittent HD.

Once started on hemodialysis, the vast majority of patients were discharged into an outpatient hemodialysis unit with little or no discussion about dialysis options. At our institution,

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approximately 87% of those starting dialysis emergently in hospital stayed on hemodialysis, which led to an extreme overtaxing of our incentre hemodialysis capacity, and an underutilization of our home dialysis programs. Additionally, there was a limited capacity for outpatient hemodialysis in our already expanded units, and this led to an inefficient and costly situation of patients waiting in hospital solely to obtain hemodialysis. These individuals would often be going home "on pass" between treatments, and coming in to have dialysis in their hospital bed. Furthermore, because of the lack of dialysis capacity in Toronto and the surrounding area, other centres were not able accommodate individuals who started at our hospital but lived near other dialysis units, thus necessitating many people travelling significant distances to come for dialysis, until a spot came up closer to them. Many centres had wait lists of one to two years for transfers, exacerbating the expense and frustration of individuals who lived at a distance. The UHN is a major centre for oncology, as well as organ transplantation, such as liver, lung and heart transplants and, due to nephrotoxic medications, many individuals needing dialysis were from these programs, and frequently lived in a great variety of areas far from downtown Toronto.

Consulting advanced practice nurse program

The UHN Division of Nephrology took a concerted look at addressing the issue of individuals transitioning from emergent HD predominantly to incentre HD, with a view to decreasing the previous 87% HD of new in-hospital dialysis patients. One of the visions of the Division of Nephrology is to advance home dialysis for quality of life, as well as fiscal reasons. As the UHN is a large teaching hospital, the nephrologists rotate monthly and the house staff who provide day-to-day care are only on nephrology for a short period of time, generally one to two months. This configuration, although amenable to physician learning, does not provide the continuity, time, and expertise to assist individuals in making decisions regarding treatment modality. Thus, a model of a dedicated practitioner was decided upon.

The individual selected to pilot this role was a nephrology advanced practice nurse (APN), who was equally familiar with HD and PD and committed to the philosophy of home dialysis. The population for this "consulting advanced practice nurse" (cAPN) consisted of any individual starting dialysis as an in-patient in any of the three hospitals within UHN, and one other affiliated hospital, serviced by UHN nephrology consult service.

The role was developed to enhance education regarding dialysis modalities, and provide support and logistics to attain the chosen modality. Additionally, the cAPN provided a link between the patient and family and the medical team, often bringing issues forward at this most critical and vulnerable time in a person's life.

cAPN patient assessment and role

During the initial meeting/assessment with patients, it is important to develop rapport and to recognize and acknowledge the difficult time in the individual's and family's lives. Frequently, the individual has recently come out of an ICU setting and is, in many cases, "shell-shocked" to find that they are in renal failure and often in need of dialysis for life. At this time, it is helpful to ascertain their understanding of what has happened to them during this hospital admission, and how they are feeling at the moment. It is also important to assess their support systems—family, friends or agencies that are involved in their care and well-being. This meeting should never be rushed and, if at all possible, should be held in a comfortable, private area, with family, if the patient wishes.

Discussions ensue regarding their medical issues, with a goal of identifying medical reasons to choose one modality over another, such as previous abdominal surgeries, ostomies, vasculopathies, etc. Equally important is a discussion of their general social situation, with a view to thinking of home modalities and supports that may be required. (Early on in this role, with great enthusiasm, I made the embarrassing faux-pas of encouraging home dialysis, to which the patient agreed, only to find that the individual did not, in fact, have a home, and slept on the streets and in shelters!).

Of utmost importance and priority is to understand the values and lifestyle of the individual and family. Discussions around their personal values such as independence, travel, family, work, cottage, home situation, etc., provides insight into their abilities and feelings around self-care, and can be invaluable in discussions of home dialysis. This is the foundation of discussions regarding modality, as, if there are no medical contraindications to one form of dialysis over another, the decision should be guided by an individual's values.

It is important to begin education at the basics, with discussions of fundamental renal function, renal failure, and the need for renal replacement therapy. As adult learners, patients have a wealth of knowledge from experience, and this should be tapped into. It is helpful to see if they know anyone on dialysis, or have even HEARD of dialysis. Frequently the answer is "no", or just what they see on TV shows like **ER** or movies such as **Steel Magnolias.** Discussions at this stage are simplified, in deference to the patients often weakened condition, and often high stress level. These discussions take place over whatever period is comfortable for the patient and family, and often require repeated visits and reinforcement of information.

Another principle of adult education is to vary the learning media, as we do not all learn the same way. Thus, it is important to provide information in a medium that suits the patient. The Kidney Foundation of Canada's (KFoC) manual, **Living with Kidney Disease** (2006), is provided to each individual, either in written form, on CD-ROM, on video, or on book on tape, as appropriate. Our division has purchased a number of small portable DVD players to allow individuals to review a variety of DVDs regarding dialysis modality. There are also numerous pamphlets available, largely from the KFoC, which provide clear information along with pictures. Patients have often already started on hemodialysis, thus peritoneal dialysis is often less familiar, and it is helpful to provide pictures that outline not only the procedure, but also a realistic drawing or picture of the PD catheter in an abdomen, so it is not so strange a concept for them (often, pamphlets show the sagittal drawing of the exchange process, which is a little surreal at that stage for patients). Our hospital offers home nocturnal dialysis, and has developed its own pamphlet, which assists in decision-making. The concept of transplantation is also introduced, and basic information provided.

When discussing modalities, it is important to offer the perspectives of advantages, as well as challenges to each modality, backed up by statistics such as peritonitis rates, HD catheter infection rates, and numbers of individuals on each modality. KFoC peer support is always offered, and can be invaluable in providing a subjective viewpoint on modalities, particularly home modalities. As appropriate, tours of each dialysis facility are arranged, and the individual can speak with nurses and patients on home nocturnal, PD or HD.

It is also essential to discuss the realities of the impact on the individual's life, not only of renal failure, but also the choices of renal replacement therapy. It is important to assess and draw upon individuals' coping strategies that they have employed in the past, and help them find strength at this difficult juncture in their lives. Often, learning about the options can decrease stress and assist in coping. However, the opposite can also be true. Thus, it is important to listen and learn, as well as talk and teach. A simple, but often forgotten activity is to provide a business card and contact information. (I have frequently had comments that I was the first person in the system who has offered a contact name and number.)

During these meetings, it is critical to continue to support and discuss options that would better fit into their lives. It has been seen that people have higher quality of life with home dialysis, thus it is important to impart a positive message about home dialysis and to allay fears (Manns et al., 2003; McFarlane et al., 2003).

Once the decision is made regarding dialysis modality, the relationship continues, and plans are made for a peritoneal dialysis (PD) catheter for those who choose PD, or permanent vascular access, and arranging a dialysis location for those who have decided upon HD, or meeting with transplant coordinator for those interested in transplantation. For those who live far from the hospital, every effort is made to transfer them to the care of a local dialysis unit. This activity is frequently much easier if the individual has selected a home modality, as there is often more availability in PD units than in outpatient HD. A large part of the role has also been supporting the patient and family through this most difficult time in their lives by providing listening, advocating and problem solving.

Results

Over the first 26 months of this role, the cAPN has provided education and follow-up for 233 individuals and families (Figure One). Of those, 119 remained on chronic dialysis with the UHN. Thirty-nine of the 119 (33.%) continued on incentre HD as their modality, with 51 (43%) choosing peritoneal dialysis, and 29 (24%) choosing home nocturnal hemodialysis. From the previous year, we saw 87% of those who started dialysis acutely remaining on incentre HD, and 13% choosing home dialysis. With the advent of this role, the percentage of patients on incentre HD decreased from 87% to 33%, and the percentage of patients on home dialysis increased from 13% to 67%.

The cAPN also was able to transfer 48 individuals (21% of total patients seen) to dialysis facilities closer to their homes, both on HD and PD. Occasionally, the peripheral dialysis units were unable to accept a person on incentre HD, however, eagerly accepted someone who had chosen PD, thus, the choice was a benefit to the patient as well as the nephrology unit. Most individuals who chose nocturnal HD (NHD) were trained and followed from our hospital, as there are limited training facilities for NHD.

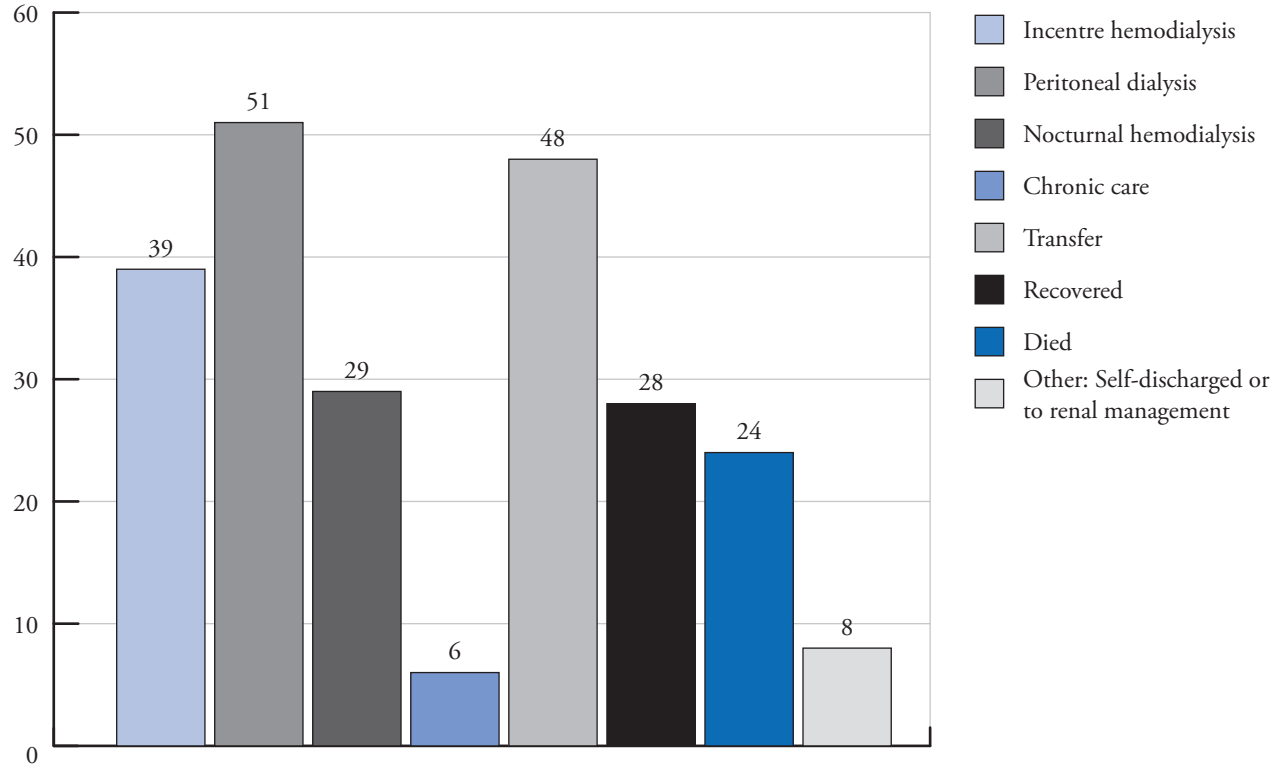

Figure One. Disposition of patients seen by cAPN March 2005 to October 2007.

Internally, we have seen considerably less congestion in our hemodialysis unit, and we have virtually eliminated the in-hospital use of beds for those patients who were simply waiting for an out-patient HD spot. This has had a positive effect on the backup in emergency room (ER), as well as relationships with other services who previously had beds occupied by those awaiting an out-patient HD spot.

Additionally, the cAPN looks at patients from a nursing perspective, and is often able to identify those individuals who have become deconditioned due to their hospital stay, which frequently includes an ICU stay. We are able to refer patients to a rehabilitation facility associated with our hospital, which also provides dialysis, assisting the recovery and discharge process. The assistance of Ontario's Community Care Access Centre (CCAC), or home care, is invaluable in providing home PD support for those who choose to have PD, but may not be physically able to carry out their treatments independently. This support is provided through a program that Dr. Matthew Oliver from Sunnybrook Health Sciences Centre in Toronto instituted, whereby CCAC nurses assist individuals to set up and connect to CCPD, thus, inability to carry out self-PD is no longer a barrier to being on the treatment (Oliver et al., 2007).

An economic analysis of the costs of home dialysis versus incentre dialysis demonstrates a theoretical cost-saving for RRT of approximately $1,328,000 during this period. The cost-savings were calculated taking into consideration the costs for each RRT modality if there was no intervention to support the move to home dialysis. This assumes the previous 87% to incentre HD and 13% to home dialysis versus 33% to incentre and 67% to home dialysis modality. (Table One).

The cAPN role is seen as complementary to our pre-dialysis clinic, the Renal Management Clinic (RMC), as the philosophy of both is to encourage living well at home. Other advantages seen with this program include early introduction of education about transplantation and referrals, early referral for vascular access, and establishment of processes to attain PD catheter insertion. However, the most important aspect of this role has been as an advocate for patients, respecting their individual values and independence.

Table One. Theoretical modality savings March 2005 to Oct 2007 if same % of pts went to ICHD instead of home dialysis (in Canadian dollars)

	Actual 33% incentre hemodialysis (ICHD)		If 87% ICHD	
	No	Cost	No	Cost
ICHD ($48K)	39	1,872,000	104	4,992,000
Home Dialysis ($28K)	80	2,240,000	16	448,000
Total	119	4,112,000	119	5,440,000
Total Modality Savings: $1,328,000				

Summary

A concerted effort was made by the UHN Division of Nephrology to expand its philosophy of "home dialysis first" to the large group of individuals who started dialysis emergently with no pre-dialysis care. It was found to be effective to have a dedicated individual, in this case, an APN, assess, educate and support this group of patients. The APN role also includes a coordination component to assist individuals get dialysis closer to their homes.

Further examination of the role and the impact upon the individuals requiring dialysis and future directions is currently being undertaken. However, the concept of a dedicated individual or team intervening with individuals who start dialysis emergently, appears to be advantageous to the patients, the program and, ultimately, to the health care system.

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Chronic kidney disease: The diagnosis of a "unique" chronic disease

By Anne Moulton, RN, BScN, CNeph(C), MN(c)

Abstract

Chronic kidney disease (CKD) is more than a chronic disease. CKD is a "unique" chronic disease. To sustain life on hemodialysis, an individual must become an expert self-manager while coping with the numerous stressors related to both the treatment regimen and to the chronic disease itself. This article addresses and discusses those unique stressors and challenges related to the diagnosis of CKD requiring dialysis.

Some of the stressors that will be highlighted include the associated partnering with technology needed for hemodialysis and how acculturation relates to this environment. Further discussion will include the complex treatment plan associated with hemodialysis including the psychosocial adaptations required by individuals to adjust to the treatment regimen, the time commitment for dialysis, the vascular access, and the impact that hemodialysis and the treatment plan has on family members.

Key words: unique, chronic illness, chronic kidney disease, hemodialysis, acculturation

My passion for understanding the lives of patients with chronic kidney disease (CKD) requiring dialysis became a reality while working on an Advanced Care Practice Fellowship (ACPF) with the Registered Nurses Association of Ontario (RNAO) in 2003. The RNAO fellowships are educational initiatives funded by the association and a nurse's place of employment. This initiative is designed to improve patient care outcomes in Ontario. It contributes to the retention of nurses by valuing their expert knowledge and experience and providing professional development opportunities. It supports the strategic directions of government health policy, health care organizations and the nursing profession.

My goals for the fellowship were to better understand the psychosocial needs that make patients receiving hemodialysis feel valued and then to apply this expertise to the clinical setting. Prior to my fellowship, I had witnessed and identified a gap in the care delivery model and recognized the importance of an organized and efficient hemodialysis program. Although nurses and other support staff work hard to ensure that patients receive their dialysis treatments in a timely manner, my concern was that nurses may be focusing more on the process than on the patients' individual needs during their treatments. I wanted to know what nurses working in a fast-paced hemodialysis environment could do to make patients' lives more tolerable during their dialysis treatments. Before I could answer this question, I needed to learn more about what psychological and social stressors our patients coped with when resigning themselves to a life on dialysis. It was only through exploration for advanced knowledge that I could begin to better understand and address the complexities of care that individuals living with chronic kidney disease experience. I learned that our patients have many unique, yet similar, characteristics.

Chronic illness

The diagnosis of a chronic illness is a stressful life event. A chronic illness has the potential to threaten a person's self-efficacy, self-identity and overall quality of life. Individuals struggle with the physiological symptoms of their specific chronic illness and with the consequences it imposes on their social and mental functioning. Generally speaking, the stressors that individuals with chronic illness endure can be overwhelming, particularly for those who are coping with several comorbidities simultaneously. Chronic illnesses share similar stressors such as threats to "body integrity, one's well-being, independence and autonomy, fulfillment of family, social and vocational roles, future goals and plans, and economic stability" (Livneh & Antonak, 2005, p. 12). Common themes among chronic diseases also include feelings of uncertainty and unpredictability, stigmatization, threats to altered body images and daily triggering events. All of these feelings serve as constant reminders of one's limitations (Livneh & Antonak). Livneh and Antonak describe the concept and psychosocial adaptation of chronic illness as an illness that "follows a dynamic, continuously evolving, long-term, complex and somewhat unpredictable course" (p. 151). CKD, similar to other chronic illnesses, follows along this continuum of unpredictability, yet CKD differs from other chronic illnesses, as individuals require life-sustaining dialysis treatments.

The "unique" characteristics of ESRD

The focus of this discussion paper is on the uniqueness of end stage renal disease (ESRD), stage five of CKD requiring hemodialysis, as a chronic disease. Highlights of this discussion will include the characteristics of ESRD, the technical hemodialysis environment, the hemodialysis treatment regimen, the concept of time for patients receiving hemodialysis, the vascular access and the impact that hemodialysis and the treatment plan have on family members.

The literature discusses several unique characteristics associated with ESRD. Dialysis is a life-sustaining treatment for individuals with CKD, requiring technological intervention. This unique characteristic distinguishes this chronic illness from other chronic diseases (Giles, 2005; Hagren, Pettersen, Severinsson, Lutzen, & Clyne, 2001; Nagle, 1998). Dialysis and the complexity of the treatment plan include rigid diet and fluid restrictions, the vascular access, lifestyle modifications, and the need to develop close relationships with the health care team (Devins et al., 2001; Hailey & Moss, 2000; Welch & Austin, 1999). The dialysis treatment plan itself requires individuals to become expert self-managers. Another unique characteristic discussed in the literature is the time investment required for the dialysis treatment (Russ, Shim, & Kaufman, 2005; Welch & Austin, 1999). For

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example, an individual on conventional hemodialysis receiving four hours of dialysis treatment thrice weekly also spends time travelling to and from the dialysis unit. Finally, chronic disease management for individuals with ESRD often impacts on family members. For individuals on home hemodialysis therapy, the presence of dialysis equipment in the homes can affect relationships with family members (Courts, 2000; Giles, 2005; Quinan, 2005). Typically, family members exercise ongoing vigilance with home hemodialysis patients in their unique caregiving role. Allow me to expand on each of these distinguishing stressors.

The hemodialysis environment: Technology and acculturation

Individuals with CKD stage five who start on chronic hemodialysis embark on a completely new way of life. This new way of life challenges their coping mechanisms, and requires continual appraisal and re-appraisal of the numerous stressors throughout the trajectory of their disease process. The need for dialysis to sustain life differentiates CKD from other chronic illnesses. Inherent in this is the need for these individuals to adjust to the hemodialysis environment and to the issue of dependency on technology. The hemodialysis environment is a stressful environment, one that could potentially impose threats to a person's well-being and sense of wholeness. Nagle (1998) discusses the meaning of technology for individuals on hemodialysis and describes hemodialysis as being "multifaceted and complex in its intrusion on human existence" (p. 90). Nagle suggests that nurses are now faced with the challenge to counteract "technologic dehumanization" (p. 80) and that patients are "reluctant to partner with technology" (p. 83). The dependency on hemodialysis machine technology is a unique characteristic of ESRD.

Acculturation is a process by which immigrants conform to the customs and behaviour patterns of their new host culture (Nevid & Rathus, 2005). To successfully conform to a new host culture, however, "changes in people's social and work activities, as well as in their thinking patterns, values, and self-identification" must be adopted (Wong-Rieger & Quintana, 1987, p. 345). Acculturation was originally defined as a process and group-level phenomenon by anthropologists when one culture was exposed continuously to another culture (Castro, 2007). Since this time, Castro explains how acculturation has now been reconceptualized by psychologists as an individual variable.

The hemodialysis environment is comparable to a new host culture and patients new to dialysis may sense the uniqueness of this culture. The hemodialysis unit is an environment with established and well-defined cultural norms, including rigid treatment scheduling to promote the flow of patients starting and ending treatments. Patients new to this highly technical environment are expected to adapt to the routines and procedures, unfamiliar sights and sounds of ongoing machine alarms and cultural norms. Relationships between acculturation and psychological adjustment are complex. Bicultural adaptation is alignment of the old and familiar culture with the new and unfamiliar culture (Nevid & Rathus, 2005). However, this adaptation takes time. The ability to maintain self-identity and autonomy is vital when adjusting to a new culture. Those who are successful at adapting to the hemodialysis environment become accustomed to the medical language, medical staff, medical procedures, and traditions of the dialysis culture. Conversely, acculturative stress refers to the reactions that people experience while adjusting to and living in a different and unfamiliar culture. It has been well-documented that many patients often experience significant stress when first starting hemodialysis (Gurklis & Menke, 1995; Lazarus & Folkman 1984). Nagle (1998) explained how patients' "images of their blood outside their body were seen as disturbing and surreal" (p. 85) and spoke of how "hemodialysis confronts patients with violations of conventional body boundaries" (p. 84).

Hagren, Pettersen, Severinsson, Lutzen, and Clyne (2001) state that "patients view the machine as a loss of freedom, a symbol of dependency on caregivers and a major disruption to their marital, family and social life" (p. 196). Patients are expected to "embrace technology as being a meaningful part in managing their illness while maintaining autonomy in every other sphere of their life" (Hagren et al., p. 202). This concept alone is quite contradictory. Hagren et al. appreciates how the idea of machine dependency linked with autonomy and independency is a difficult view for people to appreciate. Furthermore, Nagle (1998) adds that people on hemodialysis see technology as "a continual struggle against objectification in the context of illness care" (p. 90).

The dialysis environment has been described as both preserved and threatening, with patients on dialysis establishing their "territory" within the hemodialysis environment and for very legitimate reasons (O'Brien, 1983). According to O'Brien, this territorial preference can be related to several factors. Individuals may experience feelings of security in that they "survived" in that chair and location over time; the friendship ties with other patients; the preference to be in an area where a trusted nurse is working; and, possibly, to maintain the therapeutic treatment situation that "worked" for them in the past. The hemodialysis environment presents many unique challenges and patients' adaptability to this dynamic treatment environment can be challenging and threatening to one's self-worth. O'Brien asserts that probably one of the greatest underlying stresses faced by these patients is their fear of death. Patients will admit their strong identification with others because of their similar physical conditions and, therefore, death of a dialysis patient friend is personally threatening, as well as painful. O'Brien also claims that some patients will actually withdraw from others in fear of developing intimate relationships and ultimately losing yet another friend. O'Brien explains how some denial of their uncertain future must be employed to foster courage to survive.

Embracing technology and adapting to the hemodialysis environment can potentially trigger acculturative stress, however, over time patients must learn to accept this new culture and machine dependency as an integral part of their lives. What other chronic illness imposes such an environment on patients as those diagnosed with ESRD?

The hemodialysis treatment: Psychosocial stressors and adaptations

The hemodialysis treatment intrudes on the mental and physical anguish of a patient's well-being and threatens to violate human wholeness routinely (Nagle, 1998). O'Brien (1983) suggests that some healthy denial of the seriousness of the patients' conditions must be instituted in order to allow the day-to-day business of the treatment procedure to be conducted with some semblance of "normalcy." The fact that death can only be eluded by this sustained, invasive treatment—and that death is only a few days or weeks away if treatment is stopped—makes this treatment particularly foreboding and unique from other chronic illnesses. Patients face their mortality each and every time they arrive for

their dialysis treatments. It is possible that living in a clinically sustained existence is a constant reminder of how vulnerable our patients must feel and how they believe their life is being extended with their reluctant acceptance of the dialysis treatment.

The dialysis treatment is routinely associated with numerous stressors that can diminish a patient's overall quality of life, but without it, patients could not survive. Knowing they must cope with countless stressors before, during and after most dialysis treatments is a difficult reality when living with this treatment. The dialysis treatment plan is complex, with the patient expected to become an expert self-manager in his or her ongoing health condition. There is an expectation for patients to comply with the dialysis treatment itself, to maintain dietary and fluid compliance, to accept lifestyle modifications, and to develop relationships with the health care team (Hailey & Moss, 2000).

In a study of patients on chronic hemodialysis treatments by Welch and Austin (2001), when study participants were asked about their most troublesome treatment-related stressors, 33% of the patients reported lifestyle changes or modifications being the most frequently reported problem. The second most frequently reported concern of study participants was that of food and fluid limitations, especially for those persons with diabetes and the associated difficulties in managing multiple diets simultaneously. Welch and Austin also reported the third most frequently identified concern of study participants was related to the vascular access needed for hemodialysis.

According to Welch and Austin (2001), the numbers of potential treatment-related stressors for patients on chronic hemodialysis are numerous and may include the length of treatment, fatigue often associated with sleep disorders, difficult arterial-venous cannulations, itchiness, muscle cramps, dependency on staff, nausea, vomiting, and transportation issues to and from the dialysis unit, just to name a few. The "uncertainty of one's future" is a stressor that leaves many people with ESRD feeling a lack of control and powerless over their lives. Welch and Austin conclude that many patients feel angry or frustrated by their situation and these feelings of inadequacy and helplessness can easily escalate in a hospital setting when patients are subjected to routines.

Devins, Dion, Pelletier, Shapiro, Abbey, and Raiz (2001) explain how "illness intrusiveness" results from the lifestyle disruptions, attributable to an illness and/or its treatment, that interfere with continued involvement in valued activities and interests. This concept of illness intrusiveness is a major factor contributing to the psychosocial impact of CKD. The intrusive nature of ESRD with the numerous stressors related to the illness and dialysis treatment has a strong impact on the patient's quality of life. A major role for nurses in caring for people with CKD relates to the psychosocial impact of the illness. The challenges of dealing with these issues can be much more demanding than dealing with the physiological changes and complications of the dialysis treatment. Because physical and mental function have been shown in previous research to be inversely related to morbidity and mortality (Kimmel, Emont, Newmann, Danko, & Moss, 2003), these findings suggest that the management of common, non-acute symptoms often associated with the dialysis treatment may have benefits well beyond patients' immediate comfort. O'Brien (1983) believes that social and psychological problems experienced by dialysis patients are just as important as the medical ones, and probably represent the leading causes of morbidity in this group of patients. More recent literature (Kimmel, Emont, Newmann, Danko, & Moss, 2003) continues to support the claims written by O'Brien in 1983. There are many psychosocial changes for patients associated with long-term dialysis treatments. Social functioning, such as interpersonal relationships and vocational pursuits, are affected by the chronicity of dialytic treatments. There is often increased alienation over time with perceived quality of social interactions declining and patients feeling and becoming socially isolated (Kimmel et al., 2003).

Hailey and Moss (2000) claimed that depression has been recognized as the most common psychiatric diagnosis for patients with ESRD and is associated with lowered immune system functioning, non-compliance, substance abuse and other medical problems. Sensky, Leger, and Gilmour (1996) discussed the correlation between decreased depressive symptoms and increased compliance to the hemodialysis treatment. Kimmel, Emont, Newmann, Danko, and Moss (2003) reported that patients who had increased compliance with their hemodialysis treatments had more favourable outcomes with decreased morbidity and mortality compared to those patients who did not follow their treatment regimens as closely. Patient compliance depends on patient understanding, patient-perceived value of the health outcome and perception of vulnerability. Hailey and Moss also reported that 11% to 22% of ESRD patient deaths are caused by withdrawal from dialysis, which may have been precipitated by depression. Hailey and Moss discussed how anxiety is a problem for some patients with ESRD with restrictions on diet and fluids contributing to the anxiety, as well as the unpredictability of their disease and the often-present fear of death. Anxiety disorders can interfere with treatment plans, can reduce one's quality of life, and can also be associated with non-compliance.

There are countless psychosocial stressors for patients related to the hemodialysis treatment (Curtin, Bultman, Thomas-Hopkins, Walters, & Schatell, 2002). These stressors, according to Curtin et al. (2002), are all serious in that they cause a potential reduction in overall functioning and well-being. Undoubtedly, the inability to continue working would cause significant economic stress on those patients forced to retire from their work due to this chronic disease and associated treatment regimen. It is not uncommon for patients with prolonged illness and disability, such as those with ESRD, to feel alone and vulnerable, particularly when stresses are placed on their support systems over time (Al-Arabi, 2003).

"Time" and hemodialysis

Hemodialysis places a significant burden on the individual patient in terms of "time." The time commitment required for therapy is considerably more than any other chronic illness and there is some literature to suggest a relationship between time required for treatment and psychosocial outcomes such as quality of life (Russ, Shim, & Kaufman, 2005). The concept of time imposes considerable stress on patients with ESRD and is another unique characteristic for this specific chronic illness. The experience of an "altered sense of time is a basic phenomenon of the dialysis treatment" (Russ et al., 2005, p. 305). Descriptions regarding time, including the "burdens of the dialysis treatment," the "drain on the patient's time and resources" and "how dialysis occupies time by opening up and making anxious time" (p. 299) are all associated with patients' perception of their treatment having no end (Russ et al.). Russ et al. also explain how "time is divested of its prospective character, as patients inhabit a holding pattern and how the distinction between life and death is obscured" (p. 300). Patients have described the amount of time

occupied by their therapy as inhumane, as many feel "dialysis limits, even precludes their life outside the unit" (p. 305).

Many nurses witness the stress that patients experience in relation to time. Patients repeatedly wait for their dialysis station to be ready, wait for the dialysis treatment to be initiated, wait to come off dialysis, wait for transportation to and from the dialysis centre, and wait out the time of their actual treatments. This ongoing time commitment has compelled some patients to resign from activities they once enjoyed, has forced others to resign from a job that once made them feel valued and has pressured others to assume role reversals within their family unit (O'Sullivan & McCarthy, 2007).

The vascular access

A major cause of morbidity for individuals receiving dialysis is related to the patient's vascular access (Kinchen & Powe, 2001). A functioning vascular access is necessary to provide hemodialysis, which is unique to this chronic illness and patient population. An ideal vascular access is expected to deliver adequate flow rates, have a long life-span, and a low rate of complications. Complications related to vascular access can include infection, stenosis, thrombosis, aneurysm, and limb ischemia (Kinchen & Powe). Preserving vascular access patency strongly influences treatment outcomes for our patients. Our patients may have ongoing concerns about their access and worry about the longevity and integrity of their existing lifelines. Informed patients understand that without their access they can not be dialyzed and will eventually die. The potential of being faced with a threatening situation can cause considerable distress for those patients who are susceptible to vascular access complications. Patients exposed to frequent setbacks with their vascular accesses, such as those needing frequent angioplasties on their arteriovenous fistula (AVF), may anxiously arrive for their hemodialysis treatments with concerns about their access being functional or whether their transonics reading has improved since last recording. Stenosis is a common cause of functional loss of AVF (Cavagna, D'Andrea, Schiavon, & Tarroni, 2000). As an example, in a study reported by Falk (2001), a single surgeon working in the U.S. created 154 fistulas for patients on chronic hemodialysis over a four-year period. Sixty-three patients with mature fistulas required 209 procedures or 3.3 procedures per fistula, 1.75 procedures per access-year to maintain access patency (Falk, 2006). Interventions included 174 venous angioplasty procedures, 18 arterial angioplasty procedures, 14 thrombectomies, ligation of three venous side branches and two stent placement procedures (Falk). Despite efforts to promote maturation, Falk reported that only 74% of non-maturing fistulas eventually became functional. Twenty-six per cent of patients with non-maturing fistulas underwent unsuccessful invasive interventions and still were not able to use their fistulas for hemodialysis. Needless to say, living with ESRD can be an onerous experience for our patients, particularly when considering the potential complications and need for diligence in preserving the vascular access necessary for hemodialysis.

The "family" and ESRD

The last stressor I would like to highlight is the impact ESRD has on "family" due to the complex requirements of treatment and the stress it places on family over time to care for someone with a progressive and deteriorating disease. It is interesting to note that O'Brien (1983) found the quantity of time spent by a family member with the patient "increased" over a three-year period, but the quality of those interactions "decreased" over time. More recent literature suggests that next-of-kin are able to convey a large degree of commitment to and concern for the sick person and overcome the challenges of their transformed life situation (Ziegert & Fridlund, 2007). Today, contributions from health care providers and society enables patients' next-of-kin the support needed to cope with the many challenges they face in their caregiver roles. These support mechanisms promote the health of loved ones while eluding the feelings of confinement and social isolation (Ziegert & Fridlund). It has also been hypothesized that an internal locus of control by the caregiver is a predictor for more favourable adjustment, including during times of stress when caring for patients on hemodialysis (Piira, Chow, & Suranyi, 2002).

Unfortunately, any long-term illness or disability may result in impaired communication, problems in regard to social goal-setting and inadequacy in the assumption of appropriate role behaviours. Most patients with CKD on hemodialysis must forfeit their jobs, with role reversals being imminent. All patients on hemodialysis typically experience some degree of limitations. Patients become socially isolated over time as our society often draws away from chronically ill patients, leaving family in a position of sometimes being the sole supporters. Patients often become more dependent as their illness worsens and their reaction to this dependency may include aggressive behaviour, which could then lead to extreme dependency and anxiety. A 2004 report on caregiving in the United States conducted by the National Alliance for Caregiving and the American Association of Retired Persons estimated that more than half of those who provide major care for a loved one experience stress and emotional strain. Considering these statistics, it seems plausible that many family members are susceptible to experiencing feelings of "burnout" as a stress reaction to long-term adaptation to maintenance hemodialysis. A difficult stressor for family members is the uncertainty of the patient's condition and with their prognosis (O'Brien, 1983). Ziegert, Fridlund and Lidell (2007) reiterate how a family is directly affected by a family member diagnosed with a chronic illness such as ESRD, and how life changes for everyone in the family unit.

Home hemodialysis can alleviate and even eliminate some of the stressors from both patients and family members by increasing flexibility with scheduled dialysis treatments and through promotion of independence and self-care benefits. However, having the machine and supplies occupying space in one's home is not necessarily considered a normal environment in today's society. Courts (2000) acknowledges the stress and complexities of home hemodialysis and also recognizes the stress this therapy has on family members. It seems apparent that caregivers could be distressed with dialyzing family at home if they understand the potential mistakes that could occur during dialysis resulting in risks to health and life. The experience of dialysis can be very destructive for both individuals with the disease and those individuals' family (Courts, 2000) if safeguards are not in place. Many individuals on dialysis suffer from feelings of inadequacy in the roles of parent and sexual partner, and asymmetry in the relationship produces a negative self-image for many individuals. Family must often assume added responsibilities to compensate for these losses and this, in turn, produces a strain on relationships (Ziegert, Fridlund & Lidell, 2007). It is understandable that

depression, the strongest predictor of quality of life, is so prevalent amongst our patients (Welch & Austin, 2001).

Conclusion

There are common stressors and challenges for patients with ESRD on chronic hemodialysis that have been identified to support the claim that this chronic illness is unique. For patients on hemodialysis, there are challenges associated with adaptation to the technical environment, the psychosocial stressors related to the routine dialysis treatments, the time commitment required for treatments, the risk of vascular access complications and the potential stress on family, more specifically for those patients on home therapy.

Our goal, as nurses, is to support patients and their families to better handle these challenges by being sensitive to and understanding the delicate balance of living with dialysis our patients endure. Although dialysis is a highly effective treatment in preventing immediate death from renal failure, patients' life expectancy still remains short. Their continual struggle for living a normal life is difficult when addressing the evolving physiological and psychological demands of their transformed life condition.

Attempts at self-managing a chronic illness such as ESRD are demanding when one's life is controlled by medical equipment, a rigorous medical treatment and expectations of compliance by caregivers and medical staff. ESRD encroaches on every facet of an individual's life. Requiring dialysis makes this chronic illness unique and, despite efforts to live a normal life, individuals are continually reminded that their existence is dependent on the many variables discussed in this paper. Further research on the challenges facing patients living with chronic illness in general, compared to those patients living with ESRD, needs to be conducted to strengthen the hypothesis that ESRD poses unique challenges and stressors for patients on dialysis.

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Conversion from epoetin alfa to darbepoetin alfa within the Manitoba Renal Program: Evaluation of dose ratios

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Abstract

We sought to describe dose conversion ratios between epoetin alfa and darbepoetin alfa for patients with anemia of chronic kidney disease (CKD) in a large provincial renal program. Hemodialysis (HD), peritoneal dialysis (PD) and pre-dialysis patients with CKD were included. Laboratory parameters and darbepoetin alfa doses were compared to epoetin alfa doses (same route). In 2005, 857 patients received darbepoetin alfa and were compared to 746 patients who received epoetin alfa in 2003-2004. Mean dose conversion ratios were 12,939 IU, 53.1 µg, 244:1 for HD; 9,273 IU, 41.8 µg, 222:1 for PD; and 5,516 IU, 25.2 µg and 219:1 for CKD patients. The mean hemoglobin and iron parameters were within K/DOQI targets on both drugs. Conversion ratios in HD, PD and CKD patients using erythropoietic therapies was greater than 200:1 with both intravenous and subcutaneous dosing. Renal programs across Canada should consider dosage conversion ratios in addition to drug acquisition costs when considering a formulary decision about erythropoiesis stimulating agents.

Key words: epoetin, darbepoetin, dosage conversion, chronic kidney disease

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Introduction

Anemia is a frequent complication of chronic kidney disease (CKD), and its management typically includes the use of erythropoietic agents. Erythropoietic therapies have been shown to improve hemoglobin concentrations, reduce transfusion requirements, provide cardioprotection through regression of left ventricular hypertrophy and improve quality of life (Pisoni, Bragg-Gresham, Young, Akizawa, Asano, Locatelli et al., 2004; Locatelli, Canaud, Giacardy, Martin-Malo, Baker, & Wilson, 2003). Currently, available agents in Canada include epoetin alfa and darbepoetin alfa. Advantages of darbepoetin alfa as compared to epoetin alfa include less frequent administration and similar routes with subcutaneous (SC) and intravenous (IV) dosing (Egrie & Browne, 2001; Macdougall, Gray, Elston, Breen, Jenkins, Browne, & Egrie, 1999).

An issue that remains controversial is the most appropriate dose conversion between epoetin alfa and darbepoetin alfa (Barnett & Cremieux, 2003; Capelli & Kushner, 2006; Cremieux, Van Audenrode, & Lefebvre, 2006; Deray, 2003; Locatelli et al., 2003; Mahajan, Boulton, & Gokal, 2004; Nissenson, Swan, Lindberg, Soroka, Beatey, Wang, et al., 2002; Nissenson, 2002; Raymond, Bernstein, Skwarchuk, Zacharias, & Vercaigne, 2004; Roger & Cooper, 2004; Scott, 2002; Shalansky & Jastrzebski, 2005). Initial investigations determined a fixed dose conversion factor of 200 IU of epoetin alfa to 1µg darbepoetin alfa, based on peptide mass equivalents (Egrie & Browne, 2001). Most subsequent clinical trials were designed using this initial dose conversion of 200:1. However, some investigators observed that this ratio increased over the study period (Nissenson et al., 2002). A combined analysis of the published randomized controlled trials observed that at the higher end of the dosage range,

the conversion from epoetin alfa to darbepoetin alfa becomes non-linear, and that large interpatient variability in the ratios of previous epoetin alfa dose to maintenance darbepoetin alfa dose exists (Scott, 2002). A recent systematic review of 21 comparative switch and non-switch studies of epoetin alfa and darbepoetin alfa treatment in 16,678 patients with CKD revealed that the conversion ratio in all studies was 217:1, while the conversion ratio in switch studies was 222:1 and the conversion ratio for non-switch studies (including cohort studies, surveys, and randomized controlled trials designed to evaluate comparative efficacy) was 203:1 (Cremieux, Van Audenrode, & Lefebvre, 2006). This analysis included many unpublished studies, as well as studies limited by several factors including: a comparison of subcutaneous epoetin alfa to intravenous darbepoetin alfa (Molina, Garcia Hernandez, Navarro, De Gracia & Ortuno, 2004; Molina, Garcia Hernandez, Navarro, Perez, Cacho & De Gracia, 2004; Roger & Cooper, 2004; Shalansky & Jastrzebski, 2005), small sample size (Mahajan, Boulton & Gokal, 2004; Molina, Garcia Hernandez, Navarro, Perez, et al.; Molina, Garcia Hernandez, Navarro, De Gracia, et al.; Roger & Cooper, 2004) and the analysis of a single hemodialysis unit (Roger & Cooper, 2004; Shalansky & Jastrzebski, 2005). Finally, few studies evaluate a population-based conversion, and, to date, no published North American switch studies evaluate the conversion between epoetin alfa and darbepoetin alfa administered by the same route.

Our provincial renal program provides care to all patients with CKD in Manitoba, Canada (population 1.2 million). In 2004, a policy was developed where darbepoetin alfa would be used as the treatment of anemia of CKD, where previously epoetin alfa was used. This decision was based on a pilot study conducted by our program, which evaluated the impact of switching patients from epoetin alfa to darbepoetin alfa and concluded that the conversion ratio between epoetin alfa and darbepoetin was greater than 200:1 in all patient groups (hemodialysis, peritoneal dialysis, and CKD patients) (Raymond et al., 2004). The purpose of this quality control initiative is to describe the dose conversion ratio between epoetin alfa and darbepoetin alfa in a much larger population of patients after a province-wide switch between these agents. The dose conversion ratio between epoetin and darbepoetin alfa can be utilized along with drug acquisition costs in order to compare expenditures for these agents for a particular program or institution.

Methods

This quality control initiative was a retrospective chart review of erythropoietic therapy within the Manitoba Renal Program. All adult hemodialysis (HD), peritoneal dialysis (PD) patients, and CKD patients receiving erythropoietic therapy within our provincial renal program were converted from epoetin alfa to darbepoetin alfa during September to December 2004. All patients were converted to darbepoetin alfa using the product monograph conversion recommendations (Amgen, 2001). PD and CKD patients receiving subcutaneous epoetin alfa were switched to subcutaneous darbepoetin alfa, and all HD patients receiving intravenous epoetin alfa were switched to intravenous darbepoetin alfa. Following the switch, darbepoetin alfa doses were titrated to a target hemoglobin of 110–120 g/L. Iron management was done in accordance with current guidelines for anemia of CKD at that time (hemoglobin 110–120 g/L, ferritin 100–800 ng/L and transferrin saturation 20–50%) (Barrett, Fenton, Ferguson, Halligan, Langlois, Mccready et al., 1999; NKF-K/DOQI, 2001).

All patients with CKD receiving darbepoetin alfa in Manitoba from June to August 2005 were included in this quality control initiative. Patients were excluded if erythropoietic therapy was stopped or on hold for more than two consecutive months during this period. Data collected included: darbepoetin alfa, dose and route of administration, hemoglobin, transferrin saturation, ferritin, and the proportion of patients receiving intravenous iron. If

Table One.
Demographic characteristics

Characteristic	Epoetin alfa n=746	Darbepoetin alfa n=857
Age, years (mean ± SD)	59.1 ± 15.9	61.3 ± 15.7
Female sex	50.1%	50.2%
Patient group n (%)		
Hemodialysis	482 (64.6)	604 (71.2)
Peritoneal dialysis	153 (20.5)	142 (15.3)
Chronic kidney disease patients	111 (14.9)	111 (13.5)
Duration of dialysis, years (mean ± SD)	4.4 ± 4.8	4.7 ± 5.0
Ethnic Origins (for HD patients only)[a]		
Caucasian	50.1%	54.9%
Aboriginal[b]	39.3%	32.8%
Asian[c]	9.4%	11%
Black	1%	1.2%
Reasons for Dialysis (for HD patients only)		
Diabetes mellitus	49.5%	49.7%
Glomerulonephritis	16.2%	16.1%
Other	20.0%	18.4%
Unknown	6.2%	6.1%
Reno-vascular disease	5.3%	4.0%
Hypertension	2.8%	5.7%

[a] Data on ethnic origins for HD patients only
[b] Includes Inuit, Metis, North American Indian
[c] Includes Filipino, Oriental, and East Indian

patients received intravenous iron at any point during the data collection period, they were considered to be receiving intravenous iron. All laboratory values were measured with standard methods at the individual sites across the province.

Mean hemoglobin was based on a patient's average monthly hemoglobin over the data collection period. Due to the relative frequency of blood work, HD patients had to have at least two available hemoglobin values, and PD and CKD patients had to have at least one hemoglobin value available. Ferritin and transferrin saturation values were based on a single value per patient during the evaluation period, as these laboratory tests are only measured routinely every three months in our program.

Epoetin alfa dosing parameters were drawn from historical cohorts of our program's patients. To assess intravenous dosing in HD patients, data from a recently published study at our institution were used; data were collected for this project over a three-month period (June to August, 2003) (Raymond, Collins, Bernstein, Skwarchuk, & Vercaigne, 2006). In order to assess subcutaneous epoetin alfa dosing, a historical cohort of PD and CKD patients was used. Data were collected over a three-month period (January to March 2004).

In order to calculate a dose conversion ratio between epoetin alfa and darbepoetin alfa, the mean weekly dose of epoetin alfa (IU) was divided by the mean weekly dose of darbepoetin alfa (µg) for each patient group (HD, PD and CKD patients). Values for serum hemoglobin, transferrin saturation and ferritin were compared using the student's t-test. All data were collected by staff of the Manitoba Renal Program, entered in Excel® and analyzed using NCSS®.

Results

Of 1,092 patients who received darbepoetin alfa, a total of 857 were included (604 HD, 142 PD, 111 CKD). They were compared to patients who had received epoetin alfa. Of 907 patients who had received epoetin alfa, 746 patients were included (482 HD, 153 PD, 111 CKD). Patient demographics are outlined in Table One, and were similar at both time periods. The mean weekly doses and dose conversion ratios for each patient group are presented in Table Two. Mean weekly doses of epoetin alfa, darbepoetin alfa and dose conversion ratios were 12,939 IU, 53.1 µg, 244:1 for HD; 9,273 IU, 41.8 µg, 222:1 for PD; and 5,516 IU, 25.2 µg and 219:1 for CKD patients. Conversion ratios in HD, PD and CKD patients using erythropoietic therapies were greater than 200:1 with both intravenous and subcutaneous dosing. Mean hemoglobin, ferritin, transferrin saturation, and proportion of patients receiving intravenous iron were similar between the two

Table Two: Results comparing dosing of erythropoietic agents

Site	Epoetin alfa	Darbepoetin	p value	Dose Ratio*
Hemodialysis	n=482	n=604		
Mean Hgb, g/L (95% CI)	113.6 (112.9–114.2)	114.4 (113.7–115.1)	p=0.082	244:1
Mean weekly dose (route)	12,939 IU (IV)	53.1 µg (IV)		
Mean # doses/week	2.12	0.90		
Mean Tsat, % (95% CI)	28.8 (27.6–29.9)	29.9 (29.0–30.8)	p=0.116	
Mean ferritin, µg/L (95% CI)	527 (487–568)	441 (412–470)	p<0.01	
IV iron use, %	79	76		
Peritoneal Dialysis	n=153	n=142		
Mean Hgb, g/L (95% CI)	113.9 (111.5-116.3)	117.8 (114.8-120.7)	p=0.047	222:1
Mean weekly dose (route)	9,273 IU (SC)	41.8 µg (SC)		
Mean Tsat, % (95% CI)	30.5 (28.6-32.4)	30.6 (28.7-32.6)	p=0.921	
Mean ferritin, µg/L (95% CI)	431 (379-483)	410 (361-459)	p=0.563	
Chronic Kidney Disease	n=111	n=111		
Mean Hgb, g/L (95% CI)	114.2 (111.9-116.5)	115.1 (113.1-117.0)	p=0.572	219:1
Mean weekly dose (route)	5,516 IU (SC)	25.2 µg (SC)		
Mean Tsat, % (95% CI)	30.3 (28.0-32.5)	30.0 (27.8-32.3)	p=0.888	
Mean ferritin, µg/L (95% CI)	379 (299-459)	324 (270-378)	p=0.263	

* IU Epoetin alfa: µg darbepoetin alfa
Tsat % = transferrin saturation, 95%; CI = 95% confidence interval; Hgb = hemoglobin;
IV = intravenous; SC = subcutaneous

groups, (79% and 76% for epoetin alfa and darbepoetin alfa respectively) and met K/DOQI guideline targets at both time periods.

Discussion

In this retrospective analysis, the dose conversion ratio between epoetin alfa and darbepoetin alfa was greater than 200:1 in all patient populations studied (HD, PD, and CKD). The strengths of this analysis include the fact that both drugs were given by the same route of administration, outliers (i.e., patients on very high or very low doses) were not removed from either population, and patients newly initiated on erythropoietic therapy were not excluded from this analysis. These results, therefore, represent a broadly generalizable strategy for conversion between these agents. Our results are similar to another Canadian study of a hemodialysis unit (n=95) that showed conversion ratios greater than 200:1, when patients were converted from subcutaneous epoetin alfa to intravenous darbepoetin alfa (Shalansky & Jastrzebski, 2005). Although the data comparison between epoetin alfa and darbepoetin alfa consists of different patients, the patient demographics (see Table One) are so similar, that it would not be expected to change the conversion ratios observed.

Our anemia management parameters of serum hemoglobin, transferrin saturation and ferritin were similar in both time periods, reflecting a similar standard of practice in both time periods. Furthermore, our average values for hemoglobin and iron parameters met the Canadian Society of Nephrology and the United States National Kidney Foundation targets for treatment of anemia of CKD at both time periods (Barrett, et al., 1999; NKF-K/DOQI, 2001).

The smaller dose conversion ratio that we observed with subcutaneous dosing in our PD and CKD patients is not unexpected. Generally, PD and CKD patients require smaller doses of erythropoietic therapy than HD patients. At lower doses, the dose conversion ratio has been shown to be closer to 200:1 and to increase in a curvilinear manner toward 300:1 with higher doses (Scott, 2002; Shalansky & Jastrzebski, 2005). Our results demonstrated somewhat higher conversion ratios for PD patients than a small study that evaluated the conversion between epoetin alfa and darbepoetin alfa in 17 PD patients. This study demonstrated that after 24 weeks, the darbepoetin dose had not changed appreciably from a 200:1 conversion ratio, while still maintaining similar hemoglobin concentrations. However, a small number of patients may have influenced the results (Mahajan, Boulton, & Gokal, 2004).

Limitations

It has been suggested that a limitation of the switch study design, where a group of patients is converted from one agent to another, is that this design favours the second agent, due to the regression to the mean phenomenon. This suggests that patients with high initial treatment doses (in this case, epoetin alfa doses) will tend to return to a long-term average dose level, because the baseline dose was artificially elevated (Cremieux, Van Audenrode, & Lefebvre, 2006). We obtained baseline epoetin doses over a three-month period in order to ensure accurate dose information. Additionally, our average epoetin dose is consistent with the dose we found in other projects within our program (Raymond et al., 2004; Vercaigne, Collins, & Penner, 2005). We therefore are confident in the epoetin alfa dosages observed. Another suggested limitation of the switch study design is the inability to control prescribing patterns that may change with time or that may change due to increased attention drawn to the prescribing of erythropoietic agents because patients are enrolled in a study (Cremieux, Van Audenrode, & Lefebvre). The retrospective nature of our analysis ensured that practice patterns continued as usual, and the fact that all anemia management parameters were not clinically different between the groups, and met K/DOQI targets, strengthens our argument that the drugs were similarly prescribed at both time points. In addition, the length of time between our patients using epoetin alfa (2003–2004) and darbepoetin alfa (2005), suggests that the conversion ratios we observed were sustained over time.

Other limitations to this study include the fact that other patient factors that could influence dosing of erythropoietic agents were not collected, including concurrent medical conditions, medications, bleeds, transfusion requirements, infections, or inflammation. However, patient demographics were similar at both time points, and anemia management parameters were not clinically different with the use of epoetin alfa or darbepoetin alfa.

Implications for practice

Drug cost is a significant variable in drug decision-making about erythropoietic agents. Although several studies have demonstrated cost savings through the use of darbepoetin alfa as compared to epoetin alfa (Brophy, Ripley, Kockler, Lee, & Proeschel, 2005; Roger & Cooper, 2004; Shalansky & Jastrzebski, 2005), others have arrived at the opposite conclusion (Morreale, Plowman, DeLattre, Boggie, & Schaefer, 2004; Papatheofanis, McKenzie, Mody, Suruki, & Piech, 2006), and others at the conclusion that these agents are cost-equivalent (Kruep & Basskin, 2005). However, it is the individual institution's drug acquisition cost that is the most important factor in the cost comparison between these agents, and underscores the importance of determining the dose conversion ratio for a specific group of patients. Renal programs across Canada can consider our observed dosage conversion ratios in addition to available drug acquisition costs when considering a formulary decision about erythropoiesis stimulating agents. Indeed, our provincial renal program realized significant cost savings due to this change in drug therapy, which supports the dose conversion ratios presented in this paper.

Conclusion

In a large analysis of HD, PD, and CKD patients using erythropoietic therapies, the dose conversion ratio of epoetin alfa to darbepoetin alfa is greater than 200:1 with both intravenous and subcutaneous dosing. Future research could evaluate individual level conversion data, and consider conversion ratios between erythropoiesis stimulating agents after a longer follow-up period.

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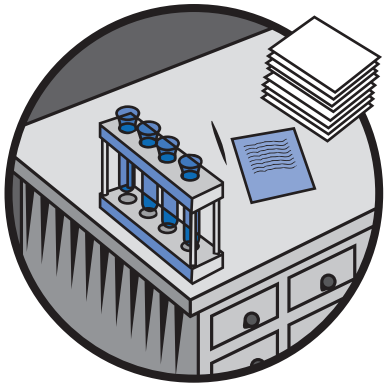
Research review

Buttonhole technique



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Introduction

Adequate vascular access is essential to providing successful hemodialysis and has a major effect on the patient's quality of life. The arteriovenous fistula is known as the "gold standard" of vascular access, due to low rates of complications, clotting and infection. The standard technique for cannulating fistulas is the rope-ladder technique, which involves cannulating the entire length of the fistula in a different site every time to allow healing of the previous puncture site. Yet, this technique may be problematic for patients with short fistula lengths or patients whose fistula is difficult to cannulate (Ball, Treat, Riffle, Scherting, & Swift, 2007; Twardowski, Lebek, & Kubara, 1977). An alternative method of cannulation is the constant-site or buttonhole cannulation technique, which offers the advantage of an easy cannulation procedure. The constant-site technique was first described in 1977 by Twardowski et al. in Polish literature and then renamed the "Buttonhole Puncture Technique" in 1984 by Krönung. Although more commonly practised in Europe and Japan, this technique is gaining popularity in North America.

Cannulation of the vascular access can be very stressful. In fact, patients often report that cannulation is one of the most stressful aspects of the dialysis treatment. Welch and Austin (1999) examined treatment-related stressors experienced by incentre hemodialysis patients and found a common concern was pain and stress related to cannulation of their vascular access. However, little is known about the influence of cannulation techniques on patients' experience. The paper compares the rope-ladder technique to the buttonhole technique and investigates prospectively the effects of buttonhole technique for self-cannulating hemodialysis patients on ease and incidence of adverse advents. A within-patient comparison (pre-post test) was done with the results of the previously used rope-ladder technique.

Methods

In the study, the buttonhole technique was introduced to home hemodialysis patients with arteriovenous fistulas performing self-cannulation using the rope-ladder technique. Thirty-three patients in the Netherlands were followed prospectively for 18 months by specialized home hemodialysis nurses, who supervised cannulation, contacted patients and made regular home visits. Inclusion criteria included the presence of a native arteriovenous fistula (radiocephalic or brachiocephalic) and the ability to perform self-cannulation. Patients with anatomical characteristics of the fistula such as tortuosity, hematomas, and short length for cannulation, frequent bad sticks and stressful and/or painful cannulation procedure were included. A bad stick was defined as the need for repeated insertion. Patients on double-needle (11) and single-needle (22) dialysis were also included. Exclusion criteria included recent fistula occlusion, high venous pressure, and the presence of extensive fistula aneurysms. Patients with arteriovenous grafts were not included. Patient selection for this study is well supported in other studies on buttonhole technique, which recommend use in patients with short fistula length, bad sticks and stressful or painful cannulation. Of the 33 patients included in the study, 15 were included because of short fistula length and 18 were included because of frequent bad sticks, stressful or painful cannulation procedure.

Patients in the study were instructed to use sharp cannulas during the break-in period. The break-in period is the time necessary to create the tunnel track or establish good buttonhole sites, and is estimated to take anywhere from three to four weeks or six to nine cannulations to form (Ball, 2006; Marticorena, Hunter, MacLeod, Petershofer, Dacouris, Donnelly et al., 2006). The tunnel track created with the buttonhole technique is often compared to the scar tissue that develops with a pierced ear. After the break-in period, patients were encouraged to use blunt cannulas. However, blunt cannulas were not available for single-needle dialysis (22 patients) and, therefore, could not be used. Of the

patients on double-needle dialysis (11), only three patients made a serious attempt to cannulate with blunt cannulas. It is unclear whether blunt cannulas/needles were exclusively used in these three patients.

It should be noted that the method used in this study differs from the classical buttonhole technique, which uses blunt cannulas/needles to cannulate established buttonhole sites. Since blunt needles were not routinely used in this study, perhaps this method should be considered as a modified buttonhole technique using sharp cannulas/needles. After the break-in period, blunt cannulas/needles are used to eliminate the risks of bleeding and cutting of the tunnel (Ball, 2006; Twardowski, 1995). In addition, it is important to recognize that cannulating buttonhole sites with blunt cannulas/needles requires a different skill set than conventional cannulation of non-buttonhole sites using sharp needles. Although the authors commented that many patients were reluctant to use blunt cannulas/needles because of the different cannulation technique required, they failed to discuss any adverse effects that may result from using sharp cannulas/needles to cannulate established buttonhole sites.

The following objective parameters were registered at baseline (rope-ladder technique) and at 1.5, 3, 6, 12 and 18 months after inclusion: ease of cannulation, incidence of bad sticks, pain, compression time after cannula removed, oozing of blood alongside the cannula, re-bleeding of puncture site after compression, signs of infection, aneurysm formation and thrombosis. Baseline data on rope-ladder technique were registered during the two weeks before the initiation of the buttonhole technique with the patients. Cannulating ease and pain during the previous two weeks were scored by the patients on a visual analogue scale; incidence of bad sticks, oozing and re-bleeding were registered as the absolute number of these events during the last two weeks of the different follow-up periods. The comparisons between cannulation techniques might have been more convincing if baseline data were collected over a longer period of time. This would have provided more robust data and possibly a more accurate account of the patients' experience with the rope-ladder technique. Data on the buttonhole technique were obtained during the 18 months of follow-up, averaged and compared with baseline data. Statistical analysis was performed using paired Student's t-test to compare follow-up data with baseline data and differences were considered significant at $P < 0.05$. Data on incidence of infection, aneurysm formation and thrombosis were recorded by the nurse by direct observation and chart review. The nurse also scored assessment of cannulation ease and appearance of the fistula and buttonhole sites.

Results

The results presented in this study suggest that ease of cannulation improved significantly ($P=0.002$) in patients using buttonhole technique and continued to improve with follow-up after three and six months. The incidence of bad sticks decreased significantly ($P=0.03$) and the patients suffering from extreme cannulating stress with the rope-ladder technique benefited the most from the buttonhole technique ($P=0.03$).

There was no increase in compression time, oozing of blood or bleeding of the puncture site. Aneurysm formation did not develop during this study and existing aneurysms showed a tendency to flatten. The authors comment there were not enough data available to formulate a conclusion about blunt cannulas.

The results, although supported in other studies on classical buttonhole technique, include the use of sharp cannulas. Cannulating with sharp cannulas/needles in restricted areas can result in weakening of the blood vessel wall, which may result in increased bleeding from needle sites and aneurysm formation (Ball, 2006; Konner et al., 2003; Krönung, 1984; Marticorena et al., 2006). The authors mentioned that in daily clinical practice, although rope-ladder technique is encouraged, often the same area of the fistula is cannulated, which may lead to aneurysmic dilatation of the puncture areas and stenoses in adjacent regions. Therefore, one could speculate that using sharp needles for buttonhole technique could have similar outcomes over time. In fact, the original study on buttonhole technique in 1979 by Twardowski and Kubara, comparing cannulation techniques (different site versus constant-site), recommended the use of dull edge needles. They suggested that cannulating buttonhole sites with sharp needles tends to cut adjacent tissues, enlarge the hole, and cause bleeding alongside the needle. As improvements have been made in the manufacturing of blunt needles since the original study, additional studies are needed to examine the use of sharp needles in established tunnels to determine if increased bleeding and/or aneurysm formation would occur.

Although the average pain score was lower with the buttonhole technique, it was not statistically significant ($P=0.12$). This finding differs from other studies on buttonhole cannulation, which report that the buttonhole technique is less painful for patients (Toma, Shintazu, Fukui, Nakai, Miwa, Takai et al., 2003; Twardowski & Kubara, 1979). The authors suggested that patients' impression of their situation at baseline might have been too optimistic, reflecting their acceptance of cannulating pain. A possible alternative is that this finding was due to the use of sharp needles to cannulate established buttonhole sites.

One negative outcome reported from the study was that three patients developed a local skin infection (9.1%) with no incidence of bacteriemia. Infection rates from the baseline data were not included in this study, suggesting that there were no reported infections with rope-ladder cannulation. During the study, patients were instructed to use an aseptic needle or disinfected forceps to remove the scab formed by the previous cannulation. Other studies on the buttonhole technique stress the importance of meticulous skin preparation and disinfecting the sites twice, once prior to cannulation and again after needles are removed to decrease the likelihood of infection (Marticorena et al., 2006; Peterson, 2002; Twardowski & Kubara, 1979). The protocol for skin preparation was modified in this study to include disinfection of sites twice and a suggestion to consider the use of mupirocine oint-

ment in order to prevent skin contamination with microorganisms. Marticorena et al. (2006) recommend the use of an antibacterial ointment during the withdrawal of the needles.

Concluding statements

Overall, the study provides useful information for Canadian nephrology nurses on the influence of cannulation techniques on patient experiences. The authors suggest that the buttonhole technique is a good alternative to rope-ladder technique for self-cannulating patients, especially patients who frequently experience difficulty with cannulation, suffer from severe stress from cannulation, or have limited cannulation sites to perform rope-ladder technique. For other centres that may be considering the buttonhole technique for their self-cannulating home hemodialysis patients, training patients on meticulous skin preparation with this technique is necessary to reduce the risk of infection. Further studies comparing cannulation techniques on patients' experience are needed in self-cannulating home hemodialysis patients.

To improve the validity and reliability of this study, patients could have been divided into two groups; those using blunt needles and those using sharp needles, and outcomes compared with baseline data. Further recommendations include extending baseline data collection beyond a two-week period to provide more robust data, and perhaps presenting a more accurate representation of the patient's cannulation experience. Although a within-patient comparison was a good design for this study, alternatively patients could have been randomized to the rope-ladder or the buttonhole technique.

Although both early and more recent studies on the buttonhole technique recommend the use of dull-edged or blunt needles in established buttonhole sites, the effects of using sharp needles to cannulate established buttonhole sites is unknown. The original study on buttonhole technique in 1979 by Twardowski and Kubara suggests that using sharp needles may result in cutting of adjacent tissues, enlarging the hole, and bleeding along the needle. Further studies on the use of sharp needles are needed to determine if these or other adverse effects would occur.

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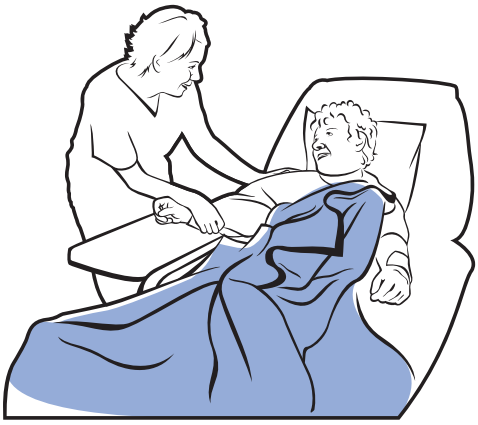
Bedside Matters…

Talking stick



There is a First Nations' tradition of the talking circle. Communication is maximized by virtue of one person speaking at a time. This is ritualized with the speaker being the one who holds the talking stick. Respect is a key component. There is no interruption. There is quiet. There is opportunity and time for listening. The speaker passes the talking stick to the next person only when he feels he has spoken what is in his heart and feels there was time to be heard.

Eugene passed the talking stick to his wife, who was always at his side. As his nurse, I always tried to address him first, even though he responded with few words. Usually, he also presented me with a wide grin as well. I felt this was confirmation that the stick was passed to Evelyn if I chose to keep up a conversation. My intention was to offer support to Eugene, get to know him, and help determine what his goals for living well would be. He was new to dialysis and there was an abdominal tumour he would need to have treated, too. A person facing two illnesses and two life-prolonging treatments can use some professional support. I could share some information, some honesty and some kindness. Eugene was pretty quiet. I told him I understood his nephrologist had suggested to him that I talk about our team's approach for shared decision-making. I mentioned advising patients and families to have conversations concerning their own values and goals regarding choices for health care during a medical crisis. I asked Eugene if I could give them a workbook to have a look at. "Sure." He said.

A few days later, I saw Evelyn as she was on her way to get Eugene some ice water. I asked how she was doing. She clenched her lips together and answered, " Fine."

I knew that Evelyn, having been handed the talking stick by her husband and not one to give up her chance to speak, was a natural in oral communication. She was not one to answer with a monosyllable. So I knew something was amiss. I followed her to the ice machine, where we would be alone.

"Is something wrong?" I asked.

"Everything is fine as long as you don't ask me how I'm doing."

"Aaaah, let's sit down." I responded.

Evelyn was an optimist for her husband, but she had worries that she tried to hide from him. She needed someone to hear her fears. I could do that.

Time and treatments went by. I encouraged Evelyn to talk with her husband about choices for his care in case he became too ill to speak for himself. I offered to talk it through with them. I asked her to take the lead, and let me know how I might help.

The next week, as I stopped to say hello to them, she said, "Eugene has been telling me he has decided not to have extensive treatments if he gets sicker."

"Sounds like you are ready to put some things into writing," I said to Eugene.

"Yes, I don't want Evelyn to have to make decisions for me like she had to do for her mother when she had a stroke. She had to guess what her mother would want. It was such a burden, she still questions her decision."

I suggested they complete the written plan and answered some specific questions. I told them I'd check in with them in two days.

When I did, there was obvious relief. The doctor was there to complete his orders the same afternoon and Evelyn relaxed. "No waiting with all that hanging over our heads," she said.

We met many times over the months. I even got to see the special photo Evelyn packed inside Eugene's lunch pack. It was a picture of him and his brother with two huge salmon they'd caught. Fishing was still something that brought another smile to his face.

When things got rough and the tumour had spread, pain set in and Eugene handed the talking stick to Evelyn for the last time. After talking to the doctor, she told Eugene, "We're stopping the dialysis and we'll give you medication to stop the pain. You might get so drowsy you can't talk. Is that okay?"

Yes. It was okay. It was what he had chosen before.

Final hours were not prolonged. They were calm. Eugene was not alone. The circle was complete. Evelyn takes the talking stick of experience and goes forward.

The talking stick is now passed to you. Please share a meaningful moment of learning from your professional life.

Send me your idea and I'll help you publish it. Send to Lee at ***lee.beliveau@fraserhealth.ca***

By Lee Beliveau, RN, CNeph(C), staff nurse, hemodialysis unit, at Surrey Hospital, Surrey, British Columbia

Department Editor: Lee Beliveau

Practice corner

PD or not PD: A joint collaboration to enhance PD exposure

At the end of 2004 in Canada, there were 30,924 patients with end stage renal disease (ESRD) receiving renal replacement therapy, with peritoneal dialysis (PD) accounting for only 11.5% (Canadian Organ Replacement Registry, 2006). Although the number of persons with ESRD is increasing each year, PD penetration nationally has been steadily declining over the past 10 years. Within the Vancouver General Hospital program, PD penetration has dramatically declined from a rate of 23% in 2003 to 16.4% in 2006.

In an effort to enhance PD exposure, with a desire to increase PD growth by 3% to 5%, the program at Vancouver General Hospital spearheaded an exciting initiative: a PD awareness clinic. This clinic is a result of a joint collaboration between the PD and chronic kidney disease (CKD) clinics, with involvement of the multidisciplinary team, including nephrologists, nurses and social workers. Referrals to the clinics may either come from the hemodialysis units or from the CKD clinic. The emphasis is to provide more information on PD as another modality of choice.

The two-hour information sessions are held once a month, with every third clinic devoted to our Chinese-speaking population. The sessions entail a tour of the PD unit, review of a video produced by the British Columbia Provincial Renal Agency, **Flexibility and Freedom with Peritoneal Dialysis,** and an overview of the dialysis procedure. As well as having the opportunity to meet with the PD nurse and social worker, attendees have an opportunity to meet a patient living with peritoneal dialysis.

Overall, the objectives of the clinics are:

1. To provide opportunities for potential clients and families to meet with the multidisciplinary team (PD nurse, physician, and social worker).
2. To establish networking opportunities with other clients living with kidney diseases.
3. To introduce a client living with kidney disease, with PD therapy as the modality of choice.
4. To provide more in-depth education on PD therapy for clients who have already chosen PD as the modality of choice or for those who need more information.

To date, we have offered nine clinics, three of which were for Chinese-speaking clients. Besides offering these monthly clinics, the program also intends to capture some outcome indicators at year-end, including PD penetration rate, modality choice selection and attendee satisfaction. We have drafted a clinic survey specifically looking at the patients' modality selection and whether the clinic has made an impact on their decision-making. Early findings from the surveys have suggested the clinic is helpful to those attending in making their final decision to start on PD. Of 37 clients, 11 have already started PD, catheter insertions are planned for two clients, one chose home hemodialysis and another was transplanted.

As of December 2007, our PD penetration has increased to 20%, from 16.4% in December 2006. Although it is too premature to conclude this is a direct reflection of the initiation of this "PD awareness" clinic, we believe that increased awareness/knowledge does help clients make more informed choices about a dialysis modality to fit their lifestyles.

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By Mary van der Hoek, RN, BSN, CNeph(C), and Julie Nhan, RN, MN, CNeph(C)

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Lanthanum carbonate

Overview

Lanthanum is a rare-earth trace metal that naturally occurs in monazite sand and coal (Drueke, 2007). Commercially, lanthanum is a byproduct of the nuclear industry and can be used as a semiconductor in florescent lights and rechargeable batteries (Drueke, 2007). Lanthanum has been recently marketed in Canada as Fosrenol®. It is available in 500 mg, 750 mg and 1000 mg chewable tablets (Anon, 2007). Lanthanum carbonate is indicated as a phosphate binder in patients with stage 5 chronic kidney disease (Anon, 2007).

Pharmacodynamic properties

Lanthanum carbonate dissociates in the acid environment of the stomach to release lanthanum ions that bind to form highly insoluble complexes with dietary phosphate. This inhibits the absorption of phosphate. In vitro studies, lanthanum appears to have similar phosphate binding capacity to calcium carbonate and is somewhat superior to sevelamer, particularly at higher pH values (Lacour, Lucas, Auchere, Ruellan, de Serre Patey, & Drueke, 2005; Sprague, 2007). This may be relevant for patients receiving medications that raise stomach pH such as proton-pump inhibitors and H2 antagonists, however, the clinical relevance is unclear.

Pharmacokinetic properties

Absorption: Lanthanum is minimally absorbed in healthy individuals. Bioavailability is stated as < 0.002% in healthy individuals (Anon, 2007). It is important to note, however, that this absorption is enhanced in both uremic animal and human models (Lacour, 2005; Sack, 2002).

Distribution: Lanthanum is highly bound to plasma proteins and, therefore, minimally affected by dialysis. Absorbed lanthanum is distributed to the bone and liver (Anon, 2007). To date, there is no evidence of direct toxicity to these tissues in human clinical studies up to three years in duration (Hutchison, 2006).

Metabolism: Lanthanum is not metabolized.

Elimination: The half-life of lanthanum in the blood is estimated at 53 hours and the half-life in the bone may be as long as 2 to 3.6 years (Anon, 2007).

Efficacy

Summary of short-term studies: A statistically significant decrease in serum phosphate levels was observed in patients receiving lanthanum carbonate at doses of 500 to 3000 mg/day in two-double blind, placebo-controlled phase II studies (Hutchison, 2000; Joy & Finn, 2003). The maximal decrease in serum phosphate levels occurred after three weeks of treatment and were maintained over four to six weeks of treatment. A 13-week phase III randomized, double blind, placebo control, parallel study was conducted in hemodialysis patients (Hutchison, Speake, & Albaaj, 2004). Serum phosphate levels were maintained < 1.9 mmol/L in 59% of patients receiving lanthanum carbonate compared with 23% of the placebo group over four weeks. This difference was statistically significant.

Comparative efficacy: A large prospective, randomized, multicentre, open label, comparator study was completed (Hutchison, Maes, Vanwalleghem, Asmus, Mohamed, Schmieder, et al., 2005). Eight hundred hemodialysis patients were randomized to either lanthanum or calcium carbonate and treated for six months. After nine weeks, both groups had a phosphate < 1.69 mmol/L. Patients who were controlled after nine weeks continued a six-month phase. There were no differences detected during this maintenance phase. However, there were insufficient patients to demonstrate a statistically significant difference if one did exist in the maintenance phase (approximately 57% of enrolled patients).

Summary of long-term studies: Long-term studies are limited, however, an open-label extension study showed that lanthanum carbonate is effective and well-tolerated over three years of treatment, with a low incidence of adverse events and no associated liver toxicity (Hutchison, Maes, Vanwalleghem, Asmus, Mohamed, Schmieder et al., 2006).

Safety and tolerability

As stated, lanthanum carbonate distributes into liver and bone. Clinical studies with up to four years follow-up have not disclosed any hepatotoxic effects of the drug in patients treated with this phosphate binder. However, it is important to note that patient numbers in these trials are small beyond three years of follow-up (Hutchison et al., 2005). Likewise, studies in humans to date have not demonstrated adverse effects of lanthanum carbonate on bone mineralization, however, studies beyond three years of follow-up are limited (D'Haese, Spasovski, Sikole, Hutchison, Freemont, & Sulkova, 2003). Studies with rats have demonstrated the interference of lanthanum with bone mineralization, but this has been attributed to phosphate depletion and not lanthanum itself (Behets, Verberckmoes, Oste, Bervoets, Salome, Cox, et al., 2005). The most common adverse effects that appear to be higher in patients taking lanthanum carbonate

By Dr. Jennifer Ryan, BSc(Pharm), Pharm D, ACPR, Clinical Manager, Pharmacy Services, Renal Pharmacist, Atlantic Health Sciences Corporation, Saint John, NB

To all **CANNT Journal** readers: Please submit drug information questions or suggestions for future drug-related topics to:

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compared to standard therapy are nausea, vomiting and diarrhea. These gastrointestinal side effects are reported by 24% to 37% of patients (Finn, 2006). Lanthanum carbonate, a non-calcium phosphate binder, causes significantly less hypercalcemia compared to calcium carbonate 2% versus 54% (Hutchison, 2005).

Pros

Despite our current pharmacologic alternatives indicated for the management of bone mineralization, 59% of patients with stage 5 chronic kidney disease (CKD) do not meet the National Kidney Foundation Kidney Disease Outcomes Quality Initiative (NKF KDOQI) targets for phosphate control (Kimata, Albert, Akiba, Yamazaki, Kawaguchi, Fukuhara, et al., 2007). Adding another agent to the bone mineralization toolkit can only help patients move closer to those goals. An advantage of lanthanum carbonate is various dose formulations and its potent phosphate-lowering capabilities. With its multiple available dosages, most patients could be managed with one tablet three times daily. This could have a significant impact on patient acceptance and compliance. One report demonstrated that up to 70% of dialysis patients are "non-compliant" with standard phosphate binders based on pill counts (Curtin, Svarstad, & Keller, 1999).

Cons

The largest "con" at this point is that there is limited long-term study data and evaluation with the product. Having said this, there does not appear to be significant adverse effects on bone, liver, or central nervous system with this agent in clinical trials up to three years. For patients receiving chronic hemodialysis, the five-year survival is reported to be 39% (USRDS, 2006). Therefore, three-year follow-up is a significant amount of time in the life of a dialysis patient. Post-marketing data will tell the full story.

Conclusion

In the opinion of this author, there is insufficient long-term safety data to recommend lanthanum carbonate as a first-line phosphate binder for the management of hyperphosphatemia in patients receiving dialysis. However, it may be an important addition to the eurotorium of therapies that can be employed to help patients meet NKF KDOQI and Canadian Society of Nephrology (CSN) targets. Lanthanum carbonate may be particularly beneficial for patients who develop adverse effects from standard therapy, or who struggle with compliance and pill burden from standard therapy.

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Profiling...

Meet the 2007 CANNT bursary, award and research grant winners

Janet Love, recipient of the CANNT 2007 Award of Excellence in Clinical Practice

By Janet Love, Clinical Nurse Leader/Link Nurse in the Kidney Function Clinic, St. Paul's Hospital, Vancouver, British Columbia

This year, I celebrate 30 years in nursing, a fact I find quite remarkable. I remember, vividly, thinking nursing training was taking way too long to complete! I have worked as a staff nurse in nephrology for 26 of those years, many as a hemodialysis nurse, including a term as assistant head nurse and head nurse in a community setting. My nephrology background also includes peritoneal dialysis and post-kidney-transplant experience, all of which prepared me for my current role of staff nurse in the Kidney Function Clinic (CKD clinic) at St. Paul's Hospital, in Vancouver. I recently accepted a position as Clinical Nurse Leader/Link Nurse in this same clinic that began in the New Year, a role that will include facilitating the transition of patients between renal programs.

The success of any program is the ability of its team to mentor, support and encourage its members to do their very best. Our clinic team exemplifies this and has contributed greatly to my sense of accomplishment in the field of nephrology.

As I look back, I see that I have become part of the renal family, a family I hold dear to my heart. The special times renal nurses spend with their patients and families are not unlike the times we share at home with our own families. We laugh, we cry, we hug and we care.

It is especially heartwarming to receive the CANNT Award for Excellence in Clinical Practice from my peers to celebrate the work I do with my renal family. Thank you, CANNT for this award and thank you for supporting and celebrating renal nurses.

Chantal Saumure, recipient of the CANNT 2007 Award of Excellence in Administration/Leadership /récipiendaire du prix d'Excellence en Gestion et Leadership ACITN 2007

By Chantal Saumure, Nurse Manager, Nephrology, Dr. G.L. Dumont Hospital, Moncton, New Brunswick

It is with pride and honour that I accepted the Award of Excellence in Administration and Leadership. I take this opportunity to acknowledge the members of our team in Moncton, New Brunswick, who continue to meet daily challenges and where I have the privilege to share our stimulating workplace. Without their participation and their devotion to our program, we would not be able to achieve great results. Hats off to you!

My academic training started with a Bachelor's Degree in Science Nursing (1991) and, with the years, I completed a Certificate in Management (1997), a Master's in Business Administration—MBA (2001), and a Post Graduate Degree in Public Health Administration (2007).

On the professional level, my experience is varied from internal medicine (staff nurse and nurse manager) and ambulatory care (nurse manager). In 1998, I was looking for a challenge and accepted the position of nurse manager in nephrology. This year will be my tenth year in this field, no regrets since!

My term on the board of directors of our association allowed me to share my expertise and to build long-lasting relationships with many of you.

Nephrology continues to be an exciting adventure where opportunities are endless. My work philosophy is simple: have fun in your work environment. Think about it! Pleasure (fun) represents a way of being, to do and to see life from a different angle. It reconciles performance and satisfaction. Take the challenge and introduce this concept in your workplace. The results will be positive, just try it!

C'est avec fierté et honneur que j'ai accepté le Prix d'excellence en gestion et leadership. Je prends l'opportunité de souligner les membres de notre équipe à Moncton au N.B. qui relève des défis au quotidien, et avec, qui j'ai l'honneur de partager un milieu de travail stimulant. Sans leur participation et leur engagement envers notre service nos réalisations seraient sans éclats. Chapeaux à vous tous!

Ma formation académique a débutée avec un Baccalauréat ès Sciences Infirmières (1991) et au fil des ans l'ajout d'un Certificat en gestion du personnel (1997), une Maîtrise en Administration des Affaires—MBA (2001) et un Certificat de 2ième Cycle en gestion publique-santé (2007).

Mon parcours professionnel est varié en passant par la médecine interne (infirmière de chevet et infirmière gestionnaire) et les soins ambulatoires (infirmière gestionnaire).

En 1998, étant à la recherche de nouveaux défis, j'accepte le poste d'infirmière gestionnaire du service de néphrologie. Dix ans déjà et aucun regret depuis!

Mon passage au sein du Conseil d'Administration de notre association m'a aussi permit de mettre à profit mes connaissances et de faire de liens durables avec plusieurs d'entre vous.

La néphrologie continue d'être une aventure palpitante ou les opportunités sont nombreuses. Ma philosophie de travail est fort simple, avoir du plaisir dans son milieu de travail. Pensez-y! Le plaisir représente une façon d'être, de faire et de voir la vie qui concilie performance et satisfaction. Je vous lance au défi d'introduire ce concept dans votre milieu de travail. Les résultats seront positifs, maintenant au défi!

Colleen Wile, recipient of the CANNT 2007 Frances Boutilier Bursary (Baccalaureate)

By Colleen Wile, Clinical Educator, Community Dialysis, QEII Health Sciences Centre, Halifax, Nova Scotia

I have worked at the QEII, Halifax, in the renal program for the past 20 years. Over the years, I have held various roles within the renal program in hemodialysis, peritoneal dialysis, transplantation, and research. I am currently the Clinical Nurse Educator for our home dialysis and satellite dialysis programs.

I am currently the CANNT VP for the Atlantic region and previously held this position from 1999 to 2001, and again from 2003 to 2005. In addition to being on the board of CANNT, I am also a member of the editorial board of the **CANNT Journal.** I was co-chair of the CANNT National Conference held in Halifax in 2005 and, as well, have had an active role in many Atlantic regional CANNT conferences over the years. I have also been involved in presenting several poster presentations at national CANNT conferences. I currently sit on the National Exam Committee for the Nephrology Certification with the Canadian Nurses Association.

I am currently working full-time while completing my Bachelor of Science in Nursing from St. Francis Xavier University through distance courses. I am extremely grateful to receive the Frances Boutilier Bursary to continue with my studies. It is a great honour to receive a bursary in the name of Frances Boutilier, someone who has offered so much to nephrology and CANNT over the years. Her dedication to both is inspiring. Receiving this bursary certainly will help with the financial burden associated with returning to school to complete my degree. I thank CANNT for this assistance.

Sherri Kensall, recipient of the CANNT 2007 Franca Tantalo Bursary (Master's)

By Sherri Kensall, Renal Care Coordinator, The Fraser Health Authority, British Columbia

I began my nursing career in 1988 on a busy surgical unit at Surrey Memorial Hospital in British Columbia. I worked there for almost 10 years, at the same time raising my four daughters. During this time, I enjoyed challenges of nursing and worked actively in patient education programs, as well as mentoring students and new staff. In 1998, I became involved in the renal dialysis program—a new program to the hospital. This was an exciting time for my peers and me as we worked together to develop a workplace culture that encouraged respect and understanding of the challenges our patients face in coping with a chronic disease. After almost 10 years, this commitment to our workplace culture is still prevalent in all those I work with. In many ways, this experience was a springboard for seeking new knowledge and experiences.

In late 2003, I became involved in a new kidney care initiative. The Fraser Health Authority (FHA), faced with a growing renal population, began to look at new ways to approach the management of renal patients to improve outcomes in a responsible way. They partnered with the Provincial Health Services Authority and Baxter Corporation for this initiative focusing on chronic disease management. Within this initiative, a major part of my role as one of six Renal Care Coordinators (RCC) is to help patients learn self-management strategies to manage their health. The role encompasses visiting patients in their homes to help proactively manage their co-morbid conditions and working with the entire renal program to influence the health of all through data collection and quality improvement initiatives.

I was accepted into the Masters of Science in Nursing Program at the University of British Columbia (UBC) in 2006, and plan to focus on chronic disease management within nephrology. So far, I have had the opportunity of exploring aspects of end-of-life care and quality of life for our renal patients, along with issues of "compliance" our patients face—areas of challenge for all of us. My coworkers have been invaluable in their eagerness to explore issues and ideas as we strive to improve care for our renal patients. I look forward to learning more and gaining new insights into the nursing profession within renal care and sharing this with my colleagues.

I thank you for this bursary and will use this support as I "embrace the challenge and commitment of further education." While the funds have helped with the cost of tuition, it is the honour of receiving this award that I cherish the most. I hope I am able to achieve even a small amount of the success and enthusiasm that Franca Tantalo demonstrated throughout her career. Thank you to CANNT and to Fresenius Medical Care Canada for their support in honouring Franca's memory through this bursary and demonstrating a commitment to education for all of us.

Lucia Costantini and Heather Beanlands, recipients of the CANNT 2007 Research Grant

By Lucia Costantini and Heather Beanlands, Ryerson University, Toronto, Ontario

Heather Beanlands and Lucy Costantini

Lucia (Lucy) Costantini and Dr. Heather Beanlands both currently work at Ryerson University in Toronto. Lucy has been a registered nurse since 1998. She started her career on the surgical unit and moved to the ICU. Lucy has been a hemodialysis nurse for five years and finds the experience very rewarding. Her education includes a Bachelors of Science in Nursing and a Masters of Nursing from Ryerson University. Lucy found the Masters program particularly exciting, as she was able to exclusively focus on issues relevant to the chronic kidney disease population. Currently, Lucy is a nursing research coordinator enabling her to continue to pursue research interests.

Heather Beanlands has worked in the area of nephrology nursing for more than 20 years in various clinical, administrative and academic roles. Currently, she is an Associate Professor in the School of Nursing at Ryerson University and her research focuses on psychosocial issues, health behaviours and quality of life for people with chronic kidney disease. She is also interested in developing novel interventions to support self-management and promote psychosocial well-being for people living with a variety of chronic conditions.

It is an honour to receive the CANNT 2007 Research Grant, along with our co-investigators Dr. Martha (Beth) Horsburgh from the University of Saskatchewan and Sylvie Leung from the University of Alberta. This project builds on previous work on self-care and caregiving for adults on dialysis led by Beth Horsburgh. The CANNT research grant will support us in revising and further developing an assessment tool to measure self-care for adults on dialysis. Developing a tool specific to self-care abilities and behaviours in dialysis will assist nurses in assessing the self-care needs of people receiving dialysis and may ultimately support the development of interventions to meet these needs. We would like to thank CANNT for its support of this project.

Editor's Note: *Their research project is entitled: "Measuring the self-care abilities and behaviours of people on dialysis."*

Diane Watson, recipient of the CANNT 2007 Manuscript Award

By Diane Watson, Advanced Practice Nurse, University Health Network, Toronto, Ontario

I think I am what we call a "Lifer" in nephrology. At the age of 16, in 1972 (don't do the math!), I started as a nurse's aide in the hemodialysis unit at the old Ottawa General Hospital as a summer job – and nephrology was an instant passion. I remember loving the fact that we all got to know the patients so well, and that, even as a nurse's aide, I could make a difference in their lives, even if just to share a laugh with them.

That passion directed my career, as I went into nursing with the goal of becoming a hemodialysis nurse. Like all of us, my path took a few turns, including living in the beautiful outport of Burgeo, Newfoundland, working in a "cottage" hospital, but, ultimately, brought me to many years of hemodialysis nursing in Toronto. This opened many doors, such as working as a nurse educator, manager, and nurse practitioner, and also offered the opportunity to be involved with the Kidney Foundation of Canada and CANNT.

It is with extreme gratitude that I accept the 2007 CANNT manuscript award, as the topic of the paper is near and dear to many of us, that of modality decision-making for those individuals who have started dialysis acutely. This award has affirmed the value of nurses' clinical practice in the lives of our patients, and in the health care system. I once bought a book for my little niece "written" by Kermit the Frog entitled, **"One Frog Can Make a Difference"**, thus I encourage every nephrology nurse to remember that we are each that frog who can have a significant impact on our patients' lives.

Jennifer Donnan and Séadna Ledger, recipients of the CANNT 2007 Journal Award

By Jennifer Donnan, Clinical Pharmacist, Eastern Health, St. John's, Newfoundland, and Séadna Ledger, Advanced Practice Renal Pharmacist at London Health Sciences Centre, London, Ontario

Jennifer Donnan **Séadna Ledger**

More than two million Canadians have diabetes and it is the leading cause of end stage renal disease (ESRD). Diabetic peripheral neuropathy (DPN) is a very common complication of both type 1 and 2 diabetes, with greater than 40% of patients being affected. Due to its high prevalence among the ESRD patients, I am often asked by patients and staff what can be used to treat and prevent DPN. That is how I came to select this as a topic to write about for the **CANNT Journal.**

I am the Advanced Practice Renal Pharmacist at London Health Sciences Centre (LHSC) where I work in the ambulatory care setting seeing patients on hemodialysis, peritoneal dialysis and home hemodialysis. I often precept hospital pharmacy residents and Jennifer Donnan was a pharmacy resident at LHSC during

the writing of this article. I asked her if she would be interested in writing an article on DPN with me and, luckily, she agreed.

I am very honoured to receive this award with Jennifer who worked very hard on this article and did an excellent job. I would like to thank CANNT for this award, but I would like to especially thank Gillian Brunier. She has been an excellent guide and mentor for this article and the other CANNT articles I have written.

Editor's Note: *Jennifer and Séadna's article "An update on the treatment and management of diabetic peripheral neuropathy" was published in the October–December 2006 issue of the* ***CANNT Journal.***

Karen Forsberg, Donna Garrod, Pam White, Heather Zadorozniak, Gloria Freeburn, Alex MacFarlane, Ian Roe and Jason Mason, recipients of the CANNT 2007 Poster Award (First place)

By Karen Forsberg, Clinical Practice Educator Peritoneal Dialysis Program, Kelowna, British Columbia

Karen Forsberg

Heather Zadorozniak

Our poster depicted the process we went through in developing a Peritoneal Dialysis Procedure Demonstration DVD. We are honoured to have been awarded first place in the 2007 CANNT poster presentation.

In British Columbia, we have a very close-knit group of peritoneal dialysis (PD) nurses who network frequently through meetings, teleconferencing and e-mails. During a teleconference, one of our nine PD programs shared the idea of developing a PD training video for patients. We all thought this was a fantastic idea, as teaching patients and families how to perform and self-manage PD can be a challenge for even the most experienced PD training nurse! A working group was then formed and, collaborating with all our PD programs, we created the video that contains information about the essential aspects of performing and managing PD. We were fortunate and grateful to have the financial support of our BC Provincial Renal Agency.

Although the DVD project had significant time commitments and challenges, we were excited to showcase this Peritoneal Dialysis Procedure Demonstration DVD via our poster. As far as we know, this is the first time an instructional PD DVD has been created and used as a training tool to support patients and families who have chosen to play an active role in their care. It also has proven a valuable reference tool for nurses doing bedside patient care in understanding what PD patients do in their own homes everyday to manage a complex chronic illness.

This project has been an incredible experience for me. I took new ideas and new knowledge back to my program about improving the quality and efficiency of PD care and am proud to have been a part of the production of a quality DVD on PD that will assist in patient and staff training. The positive response we received during our poster presentation from other PD programs throughout Canada was also very encouraging and rewarding. Our thanks go out to the 2007 CANNT committee members.

Editor's Note: *The title of their poster at CANNT 2007 was: "Peritoneal dialysis procedure demonstration DVD."*

Janet McComb, Debra Grant, Sharon Mulkerns, Sharon Csernak, Julie Foster and Wilma Cohrs, recipients of the CANNT 2007 Poster Award (Second place)

By Debra Grant, Clinical Consultant, Baxter Canada, Toronto, Ontario

Winning second place for our poster, "Keeping Patients at Home" (Kingston, Ontario) has been both exciting and rewarding for us, as a team and individually. Every member of our multidisciplinary team played a role in the development of the poster: the unit manager, clinical educator, PD nurses, clinical consultant (Baxter) and our receptionist.

Wilma Cohrs, Kim Miller, Sharon Mulkerns, Debra Grant and Janet McComb.

It all started with a CQI project where we identified gaps that we felt were responsible for losses of PD patients to hemodialysis. Peritonitis appeared to be the main culprit, however, we wanted to be comprehensive and to consider all potential causes. Prevention was the key.

Even we were surprised at the positive outcomes primarily for our patients, and especially for ourselves. We changed the patient teaching process (content, length of teaching, tools and approaches), incorporated a new and improved home visit form, improved our peritonitis rates, and are working on ways to measure the effectiveness of our new approaches. We have not had one loss due to peritonitis for a number of months now. All our hard work to teach a new PD patient is paying off—we are keeping them at home.

Recognition at a national professional conference level has had many implications for us. Sharing our successes with the renal nursing community was the most exciting and it has given us a sense of empowerment, of strength and commitment to each other, and acknowledgement of a job well done. The win has re-affirmed our ideas of what we think is important to quality patient care, which we know is important to you, our colleagues. It is the first win for any of us and it was truly exciting and rewarding to receive notification from the CANNT board. The only difficult issue now is… how we will use the prize money to treat ourselves?

Editor's Note: *The title of their poster at CANNT 2007 was: "Keeping our peritoneal dialysis patients at home."*

Colette Raymond, Andrew Armstrong, Lori Wazny, and Lavern Vercaigne, recipients of the CANNT 2007 Poster Award (Third place)

By Colette Raymond, Clinical Pharmacist, Manitoba Renal Program, Manitoba

The Manitoba Renal Program (MRP) currently provides care to approximately 830 hemodialysis (HD) patients, 195 peritoneal dialysis (PD) patients, and 3,600 renal health clinic patients. A team of dedicated pharmacists provides pharmaceutical care for all MRP patients in the province. The MRP provides funding for clinical pharmacy services at a ratio of one full-time equivalent (FTE) pharmacist to 100 HD patients, and one FTE to 300 PD patients, while funding for renal clinic patients has a target of one FTE to 300 clinic patients. There are currently 10.175 FTE renal pharmacists who provide care to all HD, PD and certain renal clinic patients in the province.

The MRP team of pharmacists is led by Dr. Lori Wazny with support from Dr. Colette Raymond and Dr. Lavern Vercaigne. The MRP pharmacists' activities include participation on rounds, comprehensive medication reviews, discharge orders for dialysis inpatients, provision of drug information, and providing education for patients and other health professionals. We are also active in developing and conducting research projects about drug utilization within the MRP. Topics of interest include erythropoietic therapies, calcium and phosphate balance, vascular access, and new drugs such as cinacalcet.

The research question presented in this poster came out of a drug information question: should we apply topical antimicrobials to catheter exit sites for prevention of hemodialysis catheter-related complications? Pharmacists are often called upon to provide evidence for drug therapy decision-making. Sometimes, as with all clinical practice issues, the literature adequately answers our questions and other times we are required to get down to work and collect our own data!

The MRP pharmacists are very proud of our achievements at the CANNT conference, held here in our home province of Manitoba. We presented a total of six poster presentations and two podium presentations. We are very honoured to receive this award!

Colette Raymond, Lori Wazny and Lavern Vercaigne.

Editor's Note: *The title of their poster at CANNT 2007 was: "Topical antimicrobials applied to catheter exit site for prevention of hemodialysis catheter-related complications: A literature review."*

Gillian Brunier, Commitment to Excellence to the CANNT/ACITN Journal for 10 Years of Service 1997–2007

By Lori Harwood, CANNT 2007–2008 Past President

I want to congratulate you, Gillian, on your 10 years as the CANNT Journal editor!

With your leadership, the **CANNT Journal** has flourished.

We were first introduced to you and Colleen Turpin as the new co-editors in the summer issue of 1997, Volume 7(3). You and Colleen joined the very dedicated group of previous editors of the CANNT Journal such as Jocelyn Lariviere, Rita Brownrigg and Leanne Dekker. In your first issue as co-editor, you began educating us with your article on the peer review process. You also outlined the upcoming challenge for the CANNT Journal to be classified as a formal peer-reviewed journal. This goal was accomplished in 1999, as the CANNT Journal was formally listed in the International Nursing Index and MEDLINE. You continue to educate us with your education sidebars in the various issues of the journal and words of wisdom in the Letter from the Editor section. In 2001, you introduced the format of an editorial board for the journal, which exists today to oversee journal activities. Last year (2006), another accomplishment was achieved as the first supplement to the CANNT Journal was published on the Clinical Educators Network, nursing recommendations for the management of vascular access in hemodialysis patients. I often refer to this issue as a key reference in my practice.

I am overwhelmed at the amount of personal time you have dedicated to the CANNT Journal as editor these past 10 years. The added tasks have been many: meeting deadlines, attending CANNT board of directors meetings twice a year, encouraging publication in the journal, conducting readership surveys, the creativity, and often providing writing workshops at CANNT conferences. You have always been willing to assist a nurse or technologist who has expressed a goal to publish an article.

I know I speak for many others in thanking you for your commitment, leadership and vision to nephrology nursing and technological practice. I'm looking forward to another 10 years!

CANNT Nominations

Call for nominations

The nominations committee is calling for nominations for the position of:

President-Elect
Vice-President Ontario Region
Vice-President Western Region
Vice-President of Technologists

Eligibility for office: Member in good standing.

General requirements:

Each candidate must:

- ✓ Understand the responsibilities of each position.
- ✓ Must be willing to commit the required amount of time to fulfil the duties of office.
- ✓ Must be familiar with, or be willing to gain knowledge of parliamentary procedure.
- ✓ Will submit a National Officer Candidate Information Form available online at www.cannt.ca or from the National Office (see address below).

Position descriptions:

1. **President-Elect:** Elected by membership for a period of one year after which he/she will become president, then past-president. Assists the president in the overall administration of the association while becoming familiar with the operation of CANNT in preparation to assume the presidency.

2. **Regional Vice-President:** Elected by membership for a two-year period. Promotes and facilitates the goals and objectives of the association throughout the region. The vice-president represents his or her region's concerns and acts as a liaison between the board of directors and the membership.

3. **Vice-President of Technologists:** Elected by membership for a period of two years. Promotes and facilitates the goals and objectives of the association. The Vice-President represents the concerns and addresses issues of the technologists on a local and national level to the Board of Directors

Deadline for nominations is May 15, 2008.
Ballots will be sent to all members after May 15, 2008.

Please submit nominations to:

CANNT
336 Yonge St., Ste 222
Barrie, ON L4N 4C8
Telephone: (705) 720-2819
Fax: (705) 720-1451
E-mail: cannt@cannt.ca

Nominating Form

Position:

_____

Name of Candidate:

_____

Membership Number:

_____

Nominated by*:

1. Name:

_____

2. Membership Number:

_____

*Nominations can only be made by current members.

I agree to let my name stand for office and if elected, I agree to serve my term of office.

_____

Signature of candidate

Date: _____

Nomination de l'ACITN

Mise en candidature

Le comité de nomination lance un appel de mise en candidature pour les postes suivants:

Président(e)-élu(e)
Vice-président(e) de l'Ontario
Vice-président(e) de l'Ouest
Vice-président(e) des Technologues

Critère d'éligibilité: Membre en règle

Pré requis :

Chaque candidat(e) doit :

- ✓ Comprendre les responsabilités qui incombent du poste.
- ✓ Être prêt(e) à s'engager à accorder le temps nécessaire pour rencontrer les responsabilités inhérentes au poste.
- ✓ Être familier(ère) avec les procédures parlementaires ou être prêt(e) à en acquérir les connaissances.
- ✓ Soumettre un Formulaire de mise en candidature disponible sur le site web à l'adresse suivante : www.cannt.ca ou en communiquant avec le bureau national à l'adresse çi-bas.

Descriptions des postes :

1. **Président(e)-élu(e) :** Élu(e) par les membres pour une période d'un an après quoi il/elle deviendra Président(e), puis, Président(e) sortant(e). Aidera à la Président(e) dans l'administration de l'Association, tout en se familiarisant avec les opérations de l'ACITN dans le but d'assumer le rôle présidentiel.

2. **Vice-président(e) régional :** Élu(e) par les membres pour une période de deux ans. Fait la promotion et facilite l'atteinte des buts et des objectifs de l'Association dans leur région respective. Le (la) Vice-Président(e) représente les intérêts de la région et agit à titre de liaison entre le Conseil d'Administration et les membres.

3. **Vice-président(e) des Technologues :** Élue(e) par les membres pour une période de deux ans. Fait la promotion et facilite l'atteinte des buts et des objectifs de l'Association. Le (la) Vice-président(e) représente les inquiétudes et les questions des technologues sur une base locale et nationale et au sein du Conseil d'Administration.

La date limite pour les mises en candidature est le 15 mai, 2008. Les bulletins de scrutin seront envoyés à tous les membres après le 15 mai, 2008.

Faites parvenir votre mise en candidature à:

ACITN
336 Yonge St. Ste 322
Barrie, ON
L4N 4C8
Téléphone: (705) 720-2819
Télécopieur: (705) 720-1451
couriel: cannt@cannt.ca

CANNT ACITN

Demande de mise en candidature

Poste :

_____

Nom du/de la candidat(e) :

_____

Numéro de membre :

_____

Proposé par* :

1. Nom :

_____

2. Numéro de membre :

_____

*Les mises en nomination ne peuvent être faite que par les membres en règles.

J'accepte la nomination du poste mentionné çi-haut. Si je suis élu(e), j'accepte d'assumer les responsabilités du poste dans son intégralité.

_____

Signature de/du la candidat(e)

Date : _____

Guidelines for authors

The **CANNT Journal** invites letters to the editor and original manuscripts for publication in its quarterly journal. We are pleased to accept submissions in either official language – English or French.

Which topics are appropriate for letters to the editor?

We welcome letters to the editor concerning recently published manuscripts, association activities, or other matters you think may be of interest to the CANNT membership.

What types of manuscripts are suitable for publication?

We prefer manuscripts that present new clinical information or address issues of special interest to nephrology nurses and technologists. In particular, we are looking for:

- original research papers
- relevant clinical articles
- innovative quality improvement reports
- narratives that describe the nursing experience
- interdisciplinary practice questions and answers
- reviews of current articles, books and videotapes
- continuing education articles.

How should the manuscript be prepared?

Form: The manuscript should be typed, double-spaced, single-sided on 8.5 x 11 inch white paper. One-inch margins should be used throughout, and the pages should be numbered consecutively in the upper right-hand corner. More formal research or clinical articles should be between five and 15 pages. Less formal narratives, question and answer columns, or reviews should be fewer than five pages.

Style: The style of the manuscript should be based on the **Publication Manual of the American Psychological Association** (**APA**), Fifth Edition (2001), available from most college bookstores.

Title page: The title page should contain the manuscript title, each author's name (including full first name), professional qualifications [i.e. RN, BScN, CNeph(C)], position, place of employment, address, telephone and fax numbers, and e-mail address. The preferred address for correspondence should be indicated.

Abstract: On a separate page, formal research or clinical articles should have an abstract of 100 to 150 words. The abstract should summarize the main points in the manuscript.

Text: Abbreviations should be spelled out the first time they are used with the abbreviation following in brackets, for example, the Canadian Association of Nephrology Nurses and Technologists (CANNT). Generic drug names should be used. Measurements are to be in Standards International (SI) units. References should be cited in the text using APA format. A reference list containing the full citation of all references used in the manuscript must follow the text.

Tables/Figures: Manuscripts should only include those tables or figures that serve to clarify details. Authors using previously published tables and figures must include written permission from the original publisher. Such permission must be attached to the submitted manuscript.

How should the manuscript be submitted?

Please forward three copies of your manuscript to: The Editor, CANNT National Office, 336 Yonge St., Ste. 322, Barrie, ON, L4N 4C8. You should retain a personal copy of the manuscript.

How are manuscripts selected for the CANNT Journal?

Each manuscript will be acknowledged following receipt. Research and clinical articles are sent out to two members of the **CANNT Journal** review panel to be reviewed in a double-blind review process. All manuscripts may be returned for revision and resubmission. Those manuscripts accepted for publication are subject to copy editing; however, the author will have an opportunity to approve editorial changes to the manuscript. The criteria for acceptance for all articles include originality of ideas, timeliness of the topic, quality of the material, and appeal to the readership.

Authors should note that manuscripts will be considered for publication on the condition that they are submitted solely to the **CANNT Journal**. Upon acceptance of submitted material, the author(s) transfer copyright ownership to the **CANNT Journal**. Material may not be reproduced without written permission of the **CANNT Journal**. Statements and opinions contained within the work remain the responsibility of the author(s). The editor reserves the right to accept or reject manuscripts.

Checklist for authors

√ Cover letter

√ Three copies of the manuscript

- Title page to include the following:
  - title of article
  - each author's name (including full first name)
  - professional qualifications
  - position
  - place of employment
  - author to whom correspondence is to be sent, including address, phone and fax number, and e-mail address
- Text of article, with abstract if applicable, **double-spaced, pages numbered**
- References (on a separate sheet)
- Tables (one per page)
- Illustrations (one per page)
- Letters of permission to reproduce previously published material.

Directives aux auteurs

Le Journal l'ACITN vous invite à faire parvenir aux rédacteurs, lettres et manuscrits originaux, pour publication dans son journal trimestriel. Nous sommes heureux d'accepter vos soumissions dans l'une ou l'autre des langues officielles, anglais ou français.

Quels sujet sont appropriés pour les lettres aux rédacteurs?

Nous acceptons les lettres aux rédacteurs concernant les manuscrits récemment publiés, les activités de l'association, ou toute autre affaire pouvant être d'intérêt aux membres de l'ACITN.

Quels types de manuscrits conviennent à la publication?

Nous préférons des manuscrits présentant de nouvelles informations cliniques ou traitant de sujets d'intérêt spécifique aux infirmiers(ères) et technologues de néphrologie. Nous recherchons en particulier:

- des exposés traitant de recherche originale
- des articles pertinents sur la pratique clinique
- des rapports sur des approches innovatrices sur l'amélioration de la qualité des soins
- des narrations nous décrivant vos expériences en soins infirmiers
- des questions et réponses sur la pratique interdisciplinaire
- critiques d'articles, livres et bandes magnétoscopiques récemment parus
- articles sur l'éducation continue.

Comment les manuscrits doivent-ils être préparés?

Forme: Le manuscrit doit être à double interlignes, sur un seul côté, sur du papier blanc de 8.5 x 11". Des marges d'un pouce doivent être utlisées, et les pages numérotées consécutivement dans le coin supérieur droit de la page. Les études de recherche et articles cliniques plus formels, devraient avoir de 5 à 15 pages. Les narrations, questionnaires-réponses ou critiques, devraient avoir moins de 5 pages.

Styles: Le style du manuscrit devrait être basé sur **Le Manuel de Publication de l'Association Américaine de Psychologie** (**AAP**), 5e édition (2001), disponible dans la plupart des librairies universitaires.

Page titre: La page titre devrait inclure le titre du manuscrit, le nom de chacun des auteurs (y compris le prénom au complet) titres professionnels [i.e. I.A., BScN, CNeph(C)], poste, employeur, adresse, numéro de téléphone et de télécopieur et l'adresse courriel. L'adresse préférée pour la correspondance devrait être spécifiée.

Abrégé: Sur une page à part, les articles cliniques ou de recherche formelle, devraient être accompagnés d'un abrégé de 100 à 150 mots. Ce sommaire devrait brièvement résumer les points principaux du manuscrit.

Texte: Les abréviations devraient être épelées la première fois qu'elles sont utilisées, suivies de l'abréviation entre parenthèses. Exemple: Association Canadienne des Infirmiers(ères) et Technologues en Néphrologie (ACITN). Les noms génériques des médicaments devraient être employés. Les mesures doivent être en Unités Standards Internationales (SI). Les références devraient être citées dans le texte utilisant le format AAP. Une liste de références, comprenant les citations complètes de toutes les références utilisées, devrait suivre le texte.

Tables/Illustrations: Les manuscrits ne devraient inclure que les tables et illustrations servant à clarifier certains détails. Les auteurs utilisant des tables et illustrations préalablement publiées, doivent fournir une autorisation écrite obtenue de l'éditeur original.

Comment soumettre les manuscrits?

S.V.P. Envoyer trois copies de votre manuscrit à: L'éditrice, l'ACITN, 336 Yonge St., Ste. 322, Barrie, ON, L4N 4C8. Vous devriez conserver une copie pour vous-mêmes.

Comment les manuscrits sont-ils choisis pour le Journal de l'ACITN?

Une lettre confirmant la réception de votre manuscrit vous sera envoyée. Les articles sur la recherche et la pratique clinique sont révisés indépendamment par deux membres du groupe de révision du **Journal de l'ACITN;** auteurs et réviseurs demeurent anonymes. Tous les articles peuvent vous êtres retournés pour révision et soumission. Les manuscrits acceptés pour publication peuvent subir des changements éditoriaux; cependant, l'auteur aura l'occasion d'approuver ces changements. Le critère d'acceptance pour tous les articles comprend l'originalité des idées, l'actualité du sujet, la qualité du matériel, et l'attrait aux lecteurs.

Les auteurs devraient prendre note que les manuscrits seront considérés pour publication à la condition qu'ils ne soient soumis uniquement qu'au **Journal de L'ACITN.** Aucune reproduction n'est permise sans l'autorisation écrite du **Journal de l'ACITN.** Les déclarations et opinions émises par les auteurs demeurent leur responsabilité. Le rédacteur en chef se réserve le droit d'accepter ou de rejeter les manuscrits.

Liste de contrôle des auteurs

√ Lettre de présentation

√ Trois copies du manuscrit

- Page titre incluant ce qui suit:
  - titre de l'article
  - nom de chaque auteur (incluant prénom au complet)
  - titres professionnels
  - poste
  - employeur
  - auteur auquel la correspondance doit être envoyer, comprenant adresse, numéro de téléphone et de télécopieur, et l'adresse courriel
- texte de l'article, avec abrégé si applicable, double interlignes, pages numérotées
- références (sur feuille à part)
- tables (une par page)
- illustrations (une par page)
- lettre d'autorisation pour reproduction de matériel préalablement publié.

Pr Renagel® Tablets

(sevelamer hydrochloride)

800 mg tablets

INDICATIONS AND CLINICAL USE

RENAGEL (sevelamer hydrochloride) is indicated for: the control of hyperphosphatemia in patients with end-stage renal disease (ESRD) undergoing dialysis.

CONTRAINDICATIONS

RENAGEL (sevelamer hydrochloride) is contraindicated in the following situations:

- patients with hypophosphatemia
- patients with bowel obstruction
- patients hypersensitive to sevelamer hydrochloride or one of the other ingredients in the product (colloidal silicon dioxide, stearic acid).

WARNINGS AND PRECAUTIONS

General

RENAGEL (sevelamer hydrochloride) tablets should be swallowed intact and should not be crushed, chewed, or broken into pieces.

Patients with renal insufficiency may develop hypocalcemia. As RENAGEL does not contain calcium, serum calcium levels should be monitored and elemental calcium should be supplemented whenever considered necessary. In cases of hypocalcemia, patients should be given an evening calcium supplement. Approximately 1000 mg elemental calcium is recommended.

Caution should be exercised to avoid hypophosphatemia, a serum phosphorus of < 0.8 mmol/L (see DOSAGE AND ADMINISTRATION).

The safety and efficacy of RENAGEL in patients with renal disease who are not undergoing dialysis has not been studied.

Gastrointestinal

The safety and efficacy of RENAGEL in patients with dysphagia, swallowing disorders, severe gastrointestinal (GI) motility disorders, or major GI tract surgery have not been established. Caution should be exercised when RENAGEL is used in patients with these GI disorders.

Special Populations

Pregnant Women: The safety of RENAGEL has not been established in pregnant women. In preclinical studies, there was no evidence that RENAGEL induced embryolethality, fetotoxicity or teratogenicity at the doses tested (up to 1 g/kg/day in rabbits; up to 4.5 g/kg/day in rats). RENAGEL should only be given to pregnant women if the benefits outweigh the risks.

Nursing Women: There have been no adequate, well-controlled studies in lactating, or nursing women.

Pediatrics: The safety and efficacy of RENAGEL has not been established in pediatric patients. The minimum age of patients treated with RENAGEL in clinical trials was 18 years old.

Geriatrics: No special considerations are needed for elderly patients.

Monitoring and Laboratory Tests

Serum phosphorus and serum calcium should be monitored every 1 to 3 weeks until the target phosphorus level is reached. The dose of RENAGEL should be adjusted based on serum phosphorus concentration and titrated
to a target serum phosphorus of ≤ 1.8 mmol/L.

RENAGEL does not contain calcium or alkali supplementation; serum calcium, bicarbonate, and chloride levels should be monitored.

ADVERSE REACTIONS

Clinical Trial Adverse Drug Reactions

Because clinical trials are conducted under very specific conditions the adverse reaction rates observed in the clinical trials may not reflect the rates observed in practice and should not be compared to the rates in the clinical trials of another drug. Adverse drug reaction information from clinical trials is useful for identifying drug-related adverse events and for approximating rates.

In a combined safety database comprised of 483 patients with end-stage renal disease undergoing hemodialysis, adverse events reported at an incidence ≥10% are provided in Table 1. From this database, adverse events are also presented separately from a single long-term randomized clinical study for RENAGEL and calcium. The adverse events presented in the table below are not necessarily attributed to RENAGEL treatment. The incidence of these events was not dose related.

Table 1: Adverse Events in Patients with End-Stage Renal Disease undergoing Hemodialysis

	Total AEs reported.	52 weeks Study of RENAGEL vs. calcium (calcium acetate and calcium carbonate)	
System Organ Class Event	**RENAGEL** **N = 483** %	**RENAGEL** **N = 99** %	**calcium** **N = 101** %
Gastrointestinal Disorders			
Vomiting	24.4	22.2	21.8
Nausea	25.3	20.2	19.8
Diarrhea	21.1	19.2	22.8
Dyspepsia	15.7	16.2	6.9
Constipation	13.3	8.1	11.9
Infections and Infestations			
Nasopharyngitis	13.9	14.1	7.9
Bronchitis	5.4	11.1	12.9
Upper Respiratory Tract Infection	7.0	5.1	10.9
Musculoskeletal, Connective Tissue and Bone Disorders			
Pain in Limb	13.7	13.1	14.9
Arthralgia	11.4	12.1	17.8
Back Pain	6.0	4.0	17.8
Skin Disorders			
Pruritus	10.4	13.1	9.9
Respiratory, Thoracic and Mediastinal Disorders			
Dyspnea	15.7	10.1	16.8
Cough	11.6	7.1	12.9
Vascular Disorders			
Hypertension	9.3	10.1	5.9
Nervous System Disorders			
Headache	18.4	9.1	15.8
General Disorders and Site Administration Disorders			
Dialysis Access Complication	4.3	6.1	10.9
Pyrexia	8.7	5.1	10.9

In one hundred and forty three patients with end-stage renal disease undergoing peritoneal dialysis with treatment duration of 12 weeks, adverse events reported at an incidence ≥10% are provided in Table 2 below. The adverse events presented in the table below are not necessarily attributed to RENAGEL treatment. The incidence of these events was not dose related.

Table 2: Adverse Events in Patients with End-Stage Renal Disease Undergoing Peritoneal Dialysis

System Organ Class Event	**RENAGEL** **(N=97)** %	**calcium** **(N=46)** %
Gastrointestinal disorders		
Dyspepsia	17.5	8.7
Vomiting	11.3	4.3
Peritonitis	11.3	4.3

The most frequently occurring serious adverse event with RENAGEL use was peritonitis at 8.2%, compared to 4.3 % with calcium. Patients receiving dialysis are subject to certain risks for infection specific to the dialysis modality. Peritonitis is a known complication in patients receiving peritoneal dialysis (PD). Therefore, patients on PD should be closely monitored to ensure the reliable use of appropriate aseptic technique with the prompt recognition and management of any signs and symptoms associated with peritonitis.

Less common clinical trial adverse events

The following adverse events have been observed with RENAGEL use with an incidence of <10%, but greater than calcium and without attribution to causality, including: abdominal distension, constipation, diarrhea, nausea, chest pain, fatigue, pyrexia, catheter site infection, anorexia, headache, cough and pruritis.

Some patients experienced adverse events related to hypercalcemia in the calcium group but not in the RENAGEL group.

Post-Market Adverse Drug Reactions

During post-marketing experience with RENAGEL, the following have been reported without attribution to causality: pruritis, rash, and abdominal pain.

OVERDOSAGE

Since RENAGEL (sevelamer hydrochloride) is not absorbed, the risk of systemic toxicity is minimal. RENAGEL has been given to healthy volunteers at doses up to 14 grams per day for 8 days with no adverse effects. The maximum average daily dose of RENAGEL that has been given to hemodialysis patients is 13 grams.

DOSAGE AND ADMINISTRATION

Dosing Considerations

- The tablets should not be bitten, chewed or broken apart prior to dosing.
- RENAGEL (sevelamer hydrochloride) should be taken immediately prior to or with meals, since its action is to bind ingested phosphate (see ACTION AND CLINICAL PHARMACOLOGY, Mechanism of Action)
- When administering any other medication where a reduction in the bioavailability of that medication would have a clinically significant effect on safety or efficacy, the physician should consider monitoring blood levels or dosing that medicine apart from RENAGEL to prevent GI binding (at least one hour before or three hours after RENAGEL).

Recommended Dose and Dosage Adjustment

The recommended dosing to be used when initiating RENAGEL in patients not using another phosphate binder are outlined below:

When switching from calcium-based phosphate binders to RENAGEL,

Starting Dose	
Initial Serum Phosphorus	**RENAGEL Tablets 800mg**
> 1.8 and < 2.4 mmol/L	3 tablets per day (2.4 grams)
≥ 2.4 mmol/L	6 tablets per day (4.8 grams)

an equivalent starting dose on a mg/weight basis of RENAGEL should be prescribed. Dosage adjustments, when necessary should be recommended every 1 to 3 weeks by increasing one tablet per meal (3 per day) until the target serum phosphorus levels are met.

The total daily dose should be divided according to meal portions during the day.

Average Maintenance Dose: Dosage should be adjusted based upon the target serum phosphorus levels. The dose may be increased or decreased by one tablet per meal at two week intervals as necessary. The average final dose in the chronic phase of a 52 week Phase 3 clinical trial designed to lower serum phosphorous to 1.6 mmol/L or less was approximately 7.1 grams, (approximately nine 800 mg tablets per day equivalent to three 800 mg tablets per meal). The maximum average daily RENAGEL dose studied was 13 grams.

Missed Dose

- If a dose is forgotten, it should be skipped. Double dosing is not advisable.

DOSAGE FORMS, COMPOSITION AND PACKAGING

RENAGEL (sevelamer hydrochloride) tablets are film-coated compressed tablets containing 800 mg of sevelamer hydrochloride. RENAGEL contains the following excipients: colloidal silicon dioxide and stearic acid. The RENAGEL tablet coating contains hypromellose and diacetylated monoglyceride. The printing ink contains iron oxide black (E172), propylene glycol, isopropyl alcohol and hypromellose (hydroxypropyl methylcellulose).

RENAGEL 800 mg Tablets are supplied as oval, film-coated tablets, imprinted with "RENAGEL 800," on the crown, single side.

RENAGEL 800 mg Tablets are available in bottles of 180 tablets.

STORAGE AND STABILITY

Store at controlled room temperature 15°C to 30°C. Protect from moisture.

Product monograph available on request.

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Mississauga, Ontario L4W 4V9 CANADA
www.genzyme.ca
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Venofer® Iron Sucrose Injection, USP
20 mg elemental iron/mL

DIN 02243716

Prescribing Summary

Patient Selection Criteria

THERAPEUTIC CLASSIFICATION: Hematinic

INDICATIONS AND CLINICAL USE

VENOFER (Iron Sucrose Injection, USP) is indicated in the treatment of iron deficiency anemia in the following patients:

- non-dialysis dependent-chronic kidney disease (NDD-CKD) patients receiving an erythropoietin
- non-dialysis dependent-chronic kidney disease (NDD-CKD) patients not receiving an erythropoietin
- hemodialysis dependent-chronic kidney disease (HDD-CKD) patients receiving an erythropoietin
- peritoneal dialysis dependent-chronic kidney disease (PDD-CKD) patients receiving an erythropoietin.

Special Populations

Pregnant Women: Teratology studies performed in rats at IV doses up 13 mg iron/kg/day (more than 9 times the maximum recommended human dose for a 70 kg person) and rabbits at IV doses up to 13 mg/iron/kg on alternate days (approximately 9 times the maximum recommended human dose for a 70 kg person) have not revealed definite evidence of impaired fertility. Fetal growth effects at these doses appeared related to low maternal food consumption and low body weight gain. There are, however, no adequate and well controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, VENOFER should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

When iron sucrose was administered at deliberate overdoses to rabbit dams (up to 215 mg/kg/day) marked fetal/placental iron overload was noted. It is unlikely that significant fetal iron overload would occur in iron deficient pregnant women receiving therapeutic doses of VENOFER to correct iron deficiency (see General).

Nursing Women: VENOFER is excreted in the milk of rats. It is not known whether VENOFER is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when VENOFER is administered to nursing women.

Pediatrics: The safety and effectiveness of VENOFER in pediatric patients has not been established. In a country where VENOFER is available for use in children, at a single site, five premature infants (weight less than 1,250 g) developed necrotizing enterocolitis and two of the five expired during or following a period when they received VENOFER, several other medications and erythropoietin. Necrotizing enterocolitis may be a complication of prematurity in very low birth weight infants. No causal relationship to VENOFER or any other drugs could be established.

Geriatrics (> 65 years of age): Clinical studies with VENOFER have not identified differences in unintended responses between elderly and younger patients. Nevertheless, dose selection for an elderly patient should be cautious, usually starting with lower doses, reflecting the greater frequency of decreased hepatic, renal or cardiac function, and of concomitant disease or other drug therapy.

CONTRAINDICATIONS

The use of VENOFER (Iron Sucrose Injection, USP) is contraindicated in patients with evidence of iron overload, patients with known hypersensitivity to VENOFER, and patients with anemia not caused by iron deficiency.

Safety Information

WARNINGS AND PRECAUTIONS

General

Because body iron excretion is limited and excess tissue iron can be hazardous, caution should be exercised in the administration of parenteral iron formulations, and treatment should be withheld when there is evidence of tissue iron overload. Patients receiving VENOFER (Iron Sucrose Injection, USP) require periodic monitoring of hematologic parameters, including hemoglobin, hematocrit, serum ferritin and transferrin saturation. Generally accepted guidelines recommend withholding administration of intravenous iron formulations from patients demonstrating a transferrin saturation > 50% or a serum ferritin > 800 ng/mL (see **DOSAGE AND ADMINISTRATION** and **OVERDOSAGE**). Transferrin saturation values increase rapidly after IV administration of iron sucrose; thus, serum iron values may be reliably obtained 48 hours after IV dosing.

Local Reactions

Care must be taken to avoid paravenous infiltration. If this occurs, the infusion of VENOFER should be discontinued immediately. Ice may be applied to cause local vasoconstriction and decrease fluid absorption. Massage of the area should be avoided.

Carcinogenesis and Mutagenesis

No long-term studies in animals have been performed to evaluate the carcinogenic potential of VENOFER.

The Ames test, with or without metabolic activation, *in vitro* mouse lymphoma forward mutation test, mouse micronucleus test, and *in vitro* human lymphocyte chromosome aberration test were conducted with iron sucrose. No mutagenicity or genotoxicity was demonstrated.

Cardiovascular

Hypotension has been reported frequently in hemodialysis dependent chronic kidney disease patients receiving intravenous iron. Hypotension also has been reported in non-dialysis dependent (NDD-CK) and peritoneal dialysis dependent (PDD-CK) chronic disease kidney patients receiving intravenous iron. Hypotension following administration of VENOFER may be related to the rate of administration and total dose administered. Caution should be taken to administer VENOFER according to recommended guidelines (see **DOSAGE AND ADMINISTRATION**).

Sensitivity/Resistance

Serious hypersensitivity reactions have been rarely reported in patients receiving VENOFER. No life-threatening hypersensitivity reactions were observed in pivotal studies, although there were several cases of mild to moderate hypersensitivity reactions characterized by wheezing, dyspnea, hypotension, rash and/or pruritis in these studies. Anaphylactoid reactions have been reported in worldwide spontaneous post-marketing reports (see **ADVERSE REACTIONS**).

Sexual Function/Reproduction

VENOFER at IV doses up to 15 mg iron/kg/dose [about 10 times the maximum recommended human dose for a 70 kg person] given three times a week was found to have no effect on fertility and reproductive performance of male and female rats.

ADVERSE REACTIONS

Adverse Events observed in all treated populations

The frequency of adverse events associated with the use of VENOFER has been documented in six randomized clinical trials involving 231 hemodialysis dependent, 139 non-dialysis dependent, and 75 peritoneal dialysis dependent patients; and in two post-marketing safety studies involving 1051 hemodialysis dependent patients for a total of 1496 patients. In addition, over 2000 patients treated with VENOFER have been reported in the medical literature.

Adverse Events Observed in Hemodialysis Dependent Chronic Kidney Disease (HDD-CKD) Patients

Adverse reactions, whether or not related to VENOFER administration, reported by >5% of treated patients from a total of 231 patients in HDD-CKD studies were as follows: hypotension (39.4%), muscle cramps (29.4%), nausea (14.7%), headache (12.6%), graft complications (9.5%), vomiting (9.1%), dizziness (6.5%), hypertension (6.5%), chest pain (6.1%), and diarrhea (5.2%).

Adverse Events Observed in Non-Dialysis Dependent Chronic Kidney Disease (NDD-CKD) Patients

Among the 182 treated NDD-CKD patients, 91 were exposed to VENOFER. Adverse events, whether or not related to VENOFER, reported by ≥5% of the VENOFER exposed patients were as follows: dysgeusia (7.7%), peripheral edema (7.7%), diarrhea (5.5%), constipation (5.5%), nausea (5.5%), dizziness (5.5%), and hypertension (5.5%). One serious related adverse reaction was reported (hypotension and shortness of breath not requiring hospitalization in a VENOFER patient). Two patients experienced possible hypersensitivity/allergic reactions (local edema/hypotension) during the study. Of the 5 patients who prematurely discontinued the treatment phase of the study due to adverse events (2 oral iron group and 3 VENOFER group), three VENOFER patients had events that were considered drug-related (hypotension, dyspnea and nausea).

In an additional study of VENOFER with varying erythropoietin doses in 96 treated NDD-CKD patients, adverse events, whether or not related to VENOFER reported by ≥5% of VENOFER exposed patients are as follows: diarrhea (16.5%), edema (16.5%), nausea (13.2%), vomiting (12.1%), arthralgia (7.7%), back pain (7.7%), headache (7.7%), hypertension (7.7%), dysgeusia (7.7%), dizziness (6.6%), extremity pain (5.5%), and injection site burning (5.5%). No patient experienced a hypersensitivity/allergic reaction during the study. Of the patients who prematurely discontinued the treatment phase of the study due to adverse events (2.1% oral iron group and 12.5% VENOFER group), only one patient (VENOFER group) had events that were considered drug-related (anxiety, headache, and nausea). Ninety-one (91) patients in this study were exposed to VENOFER either during the treatment or extended follow-up phase.

Adverse Events Observed in Peritoneal Dialysis Dependent Chronic Kidney Disease (PDD-CKD) Patients

Among the 121 treated PDD-CKD patients, 75 were exposed to VENOFER. Adverse events, whether or not related to VENOFER, reported by ≥5% of these patients were as follows: vomiting (8.0%), diarrhea (8.0%), hypertension (8.0%), peritoneal infection (8.0%), pharyngitis (6.7%), nausea (5.3%) and peripheral edema (5.3%). The only drug related adverse reaction to VENOFER administration reported by ≥2% of patients was diarrhea (2.7%). No serious drug related adverse reactions were reported during the treatment phase of study. Two VENOFER patients experienced a moderate hypersensitivity / allergic reaction (rash or swelling/itching) during the study. Three patients in the VENOFER study group discontinued study treatment due to adverse events (cardiopulmonary arrest, peritonitis, myocardial infarction, hypertension) which were considered to be not drug-related.

Post-Market Adverse Drug Reactions:

Hypersensitivity Reactions: See WARNINGS AND PRECAUTIONS.

From the post-marketing spontaneous reporting system, there were 108 reports of anaphylactoid reactions including patients who experienced serious or life-threatening reactions (anaphylactic shock, loss of consciousness or collapse, bronchospasm with dyspnea, or convulsion) associated with VENOFER administration between 1992 and August, 2005 based on estimated use in more than 4.6 million patients.

Among the 517,736 patients (estimated on the basis of 10,354,715 ampoules sold) who received VENOFER between September 1, 2005 and February 28, 2006 through market exposure, 61 patients were reported to have experienced 104 adverse reactions considered at least "possibly related" to VENOFER. A review of all the symptoms concluded that 90 symptoms are listed, 38 serious and 52 non-serious; 14 symptoms are unlisted, 5 serious and 9 non-serious.

Considering the number of patients exposed to VENOFER, the number of adverse events at least possibly related to the product has been very limited. There was a moderate decrease in the frequency of unlisted symptoms and no changes in the nature of the listed ones. During this period no overdose of misuse have been reported.

Regarding the **serious and listed** cases: no particular change or trend in severity, outcome or involved populations could be observed. A total of 38 adverse reactions were reported in 18 patients. No reaction was considered to be life threatening. The symptoms observed were: dysponea (5), hypotension (4), pyrexia (2), injection site reaction (2), erythema (2), rash (2), arthralgia (2), chills (1), circulatory collapse (1), nausea (1), vomiting (1), tachycardia (1), myalgia (1), malaise (1), abdominal pain (1), exanthema (1), oedema peripheral (1), urticaria (1), loss of consciousness (1), dizziness (1), back pain (1), headache (1).

There was no particular evolution regarding the **non-serious and listed** events. A total of 51 adverse symptoms were reported in 37 different patients. The symptoms observed were: urticaria (5), headache (5), dizziness (4), injection site extravasation (4), exanthem (3), tachycardia (3), chills (3), dyspnoea (3), rash (2), flushing (2), pruritus (2), pyrexia (2), paraesthesia (2), malaise (2), hypotension (1), vomiting (1), injection site pain (1), injection site reaction (1), oedema peripheral (1), arthralgia (1), myalgia (1), asthenia (1), skin discolouration (1), erythema (1).

In total, eight non-serious and anaphylactoid reactions have been reported during 6-month period out of the literature. Cumulatively 116 anaphylactoid reactions have been reported out of the exposure of 5,123,048 patient years/ patient to VENOFER which results in a relative prevalence of 0.0023 %.

There were 5 **serious and unlisted** adverse symptoms, involving 4 different patients. The symptoms observed were: asthma, pulmonary test decreased; abortion; respiratory failure; arthritis.

In addition, 7 patients experienced 10 **non-serious and unlisted** adverse symptoms brought to the attention of the manufacturer during the period between September 1, 2005 and February 28, 2006: oedema (2), burning sensation (2), throat tightness (1), blood iron abnormal (1), arthritis (1), bone pain (1), feeling hot (1), influenza like illness (1).

DRUG INTERACTIONS

Interactions with other drugs, food, herbal products and laboratory tests have not been established.

Oral iron should not be administered concomitantly with parenteral iron preparations. Like other parenteral iron preparations VENOFER may be expected to reduce the absorption of concomitantly administered oral iron preparations.

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Please send all submissions, questions or comments to:

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For Effective IV Iron Therapy

Get VERSATILE

Demonstrated Efficacy in Various Patient Types

A versatile IV iron for patients with chronic kidney disease (CKD), Venofer® is indicated in the treatment of iron deficiency anemia for[1]:

- Non-dialysis dependent (NDD) patients receiving or not receiving an erythropoietin
- Hemodialysis dependent (HDD) patients receiving an erythropoietin
- Peritoneal dialysis dependent (PDD) patients receiving an erythropoietin

...With Excellent Convenience

- Flexible dosing regimens (minimum total cumulative dose 1000 mg)
  - —100 to 400 mg dosing as per indication*
  - —slow IV push or infusion
- Available in vials, for expedient administration
- Over 50 years of worldwide clinical experience[2,3]

IMPORTANT SAFETY INFORMATION

Venofer® is contraindicated in patients with evidence of iron overload, patients with know hypersensitivity to Venofer, and patients with anemia not caused by iron deficiency. No life-threatening hypersensitivity reactions were observed in pivotal studies, although there were several cases of mild to moderate hypersensitivity reactions characterized by wheezing, dsypnea, hypotension, rash and/or pruritus in these studies. Anaphylactoid reactions have been reported in worldwide spontaneous post-marketing reports (see ADVERSE REACTIONS).

The most frequent adverse events (≥ 5%) whether or not related to Venofer administration, reported by: *hemodialysis dependent-CKD patients*, hypotension, muscle cramps, nausea, headache, graft complications, vomiting, dizziness, hypertension, chest pain, and diarrhea; *non-dialysis dependent-CKD patients*, dysgeusia, peripheral edema, diarrhea, constipation, nausea, dizziness, and hypertension; *peritoneal dialysis dependent-CKD patients*, vomiting, diarrhea, hypertension, peritoneal infection, pharyngitis, nausea, and peripheral edema. Hypotension has been reported frequently in hemodialysis dependent-CKD patients receiving IV iron, and has also been reported in non-dialysis dependent and peritoneal dialysis dependent-CKD patients receiving IV iron. Hypotension following administration of Venofer may be related to the rate of administration and total dose delivered.

VERSATILE IV IRON

Venofer®

iron sucrose injection, USP

*There is limited experience with administration of an infusion of 500 mg of Venofer® over 3.5–4 hours; hypotension occurred in 2 of 30 patients treated. See product monograph for complete dosing administration recommendations.
†Venofer® is not dialyzable through CA210 (Baxter) High Efficiency or Fresenius F80A High Flux dialysis membranes.

References: 1. Venofer® product monograph, revised November 20, 2006. **2.** Van Wyck DB, Cavallo G, Spinowitz BS, Adhikarla R, Gagnon S, Charytan C, et al. Safety and efficacy of iron sucrose in patients sensitive to iron dextran: North American clinical trial. *Am J Kidney Dis.* 2000;36:88-97. **3.** Charytan C, Levin N, Al-Saloum M, Hafeez T, Gagnon S, Van Wyck DB. Efficacy and safety of iron sucrose for iron deficiency in patients with dialysis-associated anemia: North American Clinical Trial. *Am J Kidney Dis.*. 2001;37:300-7.

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Venofer® is manufactured under license from Vifor (International) Inc., Switzerland.

PAAB

See prescribing summary on adjacent page.

formula® 2000 plus

The fruit of exploration: Dialysis monitoring evolves

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❑ Student Rate: $32.50 + 1.63 GST = $34.13*

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Cardholder Name: _____

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Expiry Date: _____

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❑ I have attained CNeph(C)/cdt designation
Year of designation _____

Professional registration # _____

Date last renewed: _____

❑ 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

What is Your 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
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❑ Peritoneal
❑ Pediatrics
❑ Other (Specify) _____

Return to **CANNT**
Mailing Address:

Debbie Maure, CANNT,
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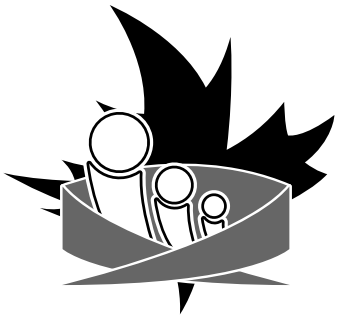

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Domaine Infirmière(ier)	*Autre domaine*
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❑ Maîtrise	❑ Maîtrise
❑ Doctorat	❑ Doctorat

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