



Report of the RBSP Division 8 Representative
From: Linda A. Sulz, RBSP Hospital Representative

1. CONFERENCE/AGM: MARCH 26-28/04 in Saskatoon — Plan to Attend! This year's educational sessions should be especially interesting. Watch for the notice.

2. RBSP HOSPITAL REPRESENTATIVE 2004-2006
 Allison Marcil has agreed to take on this role for the next 2 years. I plan to meet with her prior to bring her up to date with the issues. I'd like to thank Allison for agreeing to take on this role. I think her diversified experiences will be an asset to the Board!

3. FEES FOR JOINT CSHP/RBSP MEMBERS
 The Executive of the Board recommended to no longer provide a reduced fee for joint members. I indicated at the subsequent Board meeting that I felt since this was a negotiated reduction and that no one from the current RBSP Executive was involved that they should meet with CSHP to renegotiate this. I indicated I did not feel that a lot should have changed in 1 year to warrant such a significant increase. The Board agreed to pursue this with CSHP Branch executive before recommending any change to the current fee.

4. INSURANCE
 If you have any insurance concerns, please let me know so I can follow up. The changeover from CPBA to Grain Insurance has not been without some challenges, but the Board is addressing them as efficiently as possible.

5. RBSP BYLAWS
 These have been updated to reflect changes to the election process and to make the changeover of representatives coincide with the AGM instead of the

end of June. Please review summary page of changes for voting at AGM.

6. MISCELLANEOUS
 The majority of RBSP time over the past few months has been towards negotiating 3rd party contracts and discussions around getting informed consent from First Nation's people. The Board has also set parameters around the Negotiating committee's scope. Prior to SPhA/RBSP split, this committee was autonomous, however, now, it is responsible to the elected members of the Board. The terms of reference for this committee are being updated to reflect this new working relationship.

Health Canada has just recently abandoned the informed consent issue, as the First Nations' people were not supportive. (This was going to be a huge concern for many pharmacies in Saskatchewan)

Mandy deJong, a U of S Masters of Pharmacy Candidate is finalising her thesis which involved evaluating pharmacy services to long-term care facilities. She has offered to make a presentation to the Board of her findings, which will likely occur around the AGM in Saskatoon.

I'd like to thank you all for the opportunity of representing you for the last four years. It was a worthwhile experience.

These are only brief highlights of issues affecting us all. *Please contact me with any questions/concerns:*
 Linda A. Sulz: Ph 306-766-2940 (W), 789-7107 (H) FAX 306-766-2405; email: linda.sulz@rqhealth.ca

Editor's
CORNER

Included in this issue are some of the abstracts of the previous year's hospital pharmacy residency projects. Congratulations to all the residents for completing their programs.

We will be experiencing several vacancies in our council come October 2004. If anyone is interested in volunteering on behalf of the Branch, please feel free to contact Monica Lawrence or myself for more information or check the website for terms of reference for the various positions available.

If you are interested in volunteering to help with the 2007 CSHP AGM in Regina, please forward you name to

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Editor's Corner continued

conference chairs Monica Lawrence, monica.lawrence@rqhealth.ca or Doug Sellinger, doug.sellinger@rqhelath.ca.

If you would like to receive the PostScript and other mailings via e-mail, please contact Janis Johnson at (306) 766-2388 or janis.johnson@rqhealth.ca.

Janis Johnson
 Newsletter Editor

Branch Highlights

Once again, CSHP Sask. Branch has teamed up with RBSP to organize Pharmacy Awareness Week (PAW) from March 1 to 7th. Congratulations to Richard Cashin, PR Chair, for organizing this event!

Richard Cashin, PR Chair, met with pharmacy technician students at Kelsey Institute to present the CSHP Information Paper on the Role of the Pharmacy Technician. The information was well received and plans are underway to make this an annual initiative.

CSHP Sask. Branch Council met recently to discuss an action plan that will incorporate the values identified during their strategic planning day as well as to incorporate Vision 2006 into the Branch's activities. Activities are ongoing to put these strategies in action.

Currently, the position of Chair-Elect remains vacant for the coming year. Several other positions on Council will also become vacant in the coming year. Though much has been accomplished in recent years by members of Council, CSHP Sask. Branch cannot survive without members volunteering to fill these vacancies. Anyone who is interested in pursuing a valuable and rewarding experience with CSHP should consider volunteering for one of these positions. Upcoming vacancies will be published in the following newsletter.

CSHP National has recently released a position paper based on the Canadian Institute for Health Information (CIHI) Report. This paper identifies strategies for the reduction of adverse events that occur in hospitals and the valuable role of pharmacists in identifying and minimizing these events. CSHP Sask. Branch has participated in distributing this information to various stakeholders. A poster has been constructed by CSHP Sask. Branch, highlighting pertinent information from the National publication that will be displayed at various conferences throughout the province.

The Banff Conference was held March 19 to 21. Dave Blackburn (Education Chair 2002-2003) of CSHP Sask. Branch participated on the host committee and represented Sask. Branch in organizing the Saturday evening event. This year's conference was once again a successful event. Congratulations Dave!

A huge thank you to Melanie McLeod (CSHP Past Chair) for participating as CSHP Sask. Branch Representative on the RBSP Conference Planning Committee. The RBSP Conference will be held March 26-28th in Saskatoon.

Mark your calendars for the upcoming CSHP Sask. Branch Annual General Meeting to be held in Moose Jaw October 23-24. This year is shaping up to be another stellar event at the luxurious spa. Look for registration brochures in late August and plan to attend!

The Influence of Targeted Pharmacist Care on the Identification of Proteinuria and Microalbuminuria and Utilization of ACE-inhibitor and Angiotensin Receptor Blockers in Diabetic Inpatients

Background: Microalbuminuria (MAU) and proteinuria are early markers of diabetic kidney disease. Therapies which have demonstrated benefit in slowing the progression of kidney disease in patients with diabetes include ACE-inhibitors (ACE-Is) and Angiotensin Receptor Blockers (ARBs). Many preventive therapies are underutilized in both the diabetic and the non-diabetic population, however little data exists describing the rate of investigation and treatment for proteinuria and MAU in diabetic patients.

Purpose: To assess the rate of investigation and treatment of diabetic kidney disease in inpatients and to determine if targeted pharmacist care could influence the rate of investigation for diabetic kidney disease and the use of ACE-Inhibitors or Angiotensin Receptor Blockers for its treatment.

Methods: A retrospective review of medical records was conducted to determine the rate of investigation for proteinuria and MAU in patients admitted to medical and surgical wards. The rates of utilization of ACE-Is or ARBs in the MAU or proteinuria positive patients were evaluated. A prospective group of diabetic inpatients was identified and the investigator made recommendations for proteinuria or MAU investigation and ACE-I or ARB utilization or optimization where appropriate. Rates of investigation and treatment were compared between groups. Education sessions regarding treatment and screening for diabetic kidney disease were conducted with patients and knowledge retention of drug therapy was assessed 4-8 weeks later.

Results: In the retrospective review of Standard Care, yearly rates of investigation for proteinuria and MAU were 66.7% and 20.8% respectively, while 29.2% had not been investigated for either in the previous year. Of those patients who demonstrated proteinuria, 73.3% were receiving either an ACE-I or an ARB while 100% of MAU positive patients received therapy. In the Targeted Pharmacist Care group, recommendations for proteinuria investigation were made in 4 patients, of which 2 were accepted and investigation was carried out. For 3 of these patients, recommendations for MAU screening were made of which none were accepted. Recommendations for ACE-I/ARB therapy were made in 3 patients and all were implemented. Knowledge retention of drug therapy regarding diabetic kidney disease was 66.7%.

Conclusions: Of diabetic patients admitted, 66.7% (32 of 48) had been screened for proteinuria in the past year. Of those who were proteinuria negative, 47.1% (8 of 17) went on to be screened for MAU. Twenty nine percent (14 of 48) were not assessed at all. Of those patients who were either proteinuria or MAU positive, 78.9% (15 of 19) received either an ACE-I or an ARB. There was no difference in assessment or treatment between the two treatment groups; however, this may be due to the small number of patients in the intervention group. Education sessions regarding drug therapy were successful in informing inpatients about treatment for kidney disease.

Key Words ACE-inhibitors, Angiotensin Receptor Blockers, Microalbuminuria, Proteinuria, Chronic Kidney Disease, Diabetes Mellitus, Diabetic Nephropathy

Peter Ricci BSP
Hospital Pharmacy Resident, 2002-2003
Regina Health District

“An Evaluation of Oral Bisphosphonate, Calcium, and Vitamin D Usage for the Prevention and Treatment of Osteoporosis”

Background: Osteoporosis affects approximately 1.4 million Canadians. Oral bisphosphonates are first-line therapy for both prevention and treatment, but they have poor absorption and complicated dosage instructions. Additionally, adequate intake of calcium and vitamin D is required for optimal therapeutic benefit.

Objectives: To evaluate patient compliance with administration instructions for bisphosphonates; to assess concurrent intake of calcium and vitamin D; to determine instructions received by patients regarding bisphosphonate therapy; and to determine patient preferences for receiving instructions.

Methods: Hospital inpatients receiving alendronate, etidronate or risedronate for prevention or treatment of osteoporosis prior to admission were interviewed. Data was collected using a two part questionnaire.

Results: Seventeen patients were interviewed. Seven (41.2%) met all criteria for correct administration of bisphosphonates. Thirteen subjects (76.5%) received at least the recommended daily amount of calcium, but only 4 (23.5%) received at least the recommended amount of vitamin D. Twelve subjects (70.6%) recalled receiving instructions on bisphosphonate use. Only 6 (35.3%) recalled receiving information on calcium and vitamin D. Patients prefer to receive instructions directly from the prescribing physician and a pharmacist.

Conclusion: This small study demonstrates a need for improved patient knowledge on correct bisphosphonate administration and appropriate calcium and vitamin D intake when receiving therapy for osteoporosis.

Key words: osteoporosis, bisphosphonates, calcium, vitamin D, compliance

Kendra Pernsky BSP, Hospital Pharmacy Resident 2002-2003, Saskatoon Health Region

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The Benefits of Pharmaceutical Care in an Emergency Room
Carlee Thorsen B.S.P., St. Paul's Hospital, Saskatoon, SK

Background: Drug-related problems (DRP's) are a common cause of emergency room (ER) visits. Identification of DRP's rests on performance of an accurate medication history, usually best performed by a pharmacist.

Objective: To evaluate pharmaceutical care and continuity of care to patients admitted through the ER, then assess the satisfaction of the pharmacists and ER staff with this service.

Methods: A pharmacy resident performed medication histories and continuity of care, identified and communicated DRP's in the ER at St. Paul's Hospital, Saskatoon, SK for between February 12 and March 7, 2003. A project evaluation was distributed to pharmacy and ER staff to assess the usefulness of the pharmacy service in the ER.

Results: The pharmacy resident performed 28 medication histories, researched 17 drug information questions, provided continuity of care from the hospital to the community pharmacy in 10 patients, and medication counseled 3 patients. The pharmacy resident identified

61 and made 56 recommendations to solve DRP's. Both pharmacy and ER staff were generally satisfied with the service provided in the ER by the pharmacy resident.

Conclusion: This study supports the benefit of providing pharmaceutical care to admitted patients in the ER.

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Optimization of Vancomycin in the Regina Qu'Appelle Health Region NICU: A Review of Literature and Current Practice Across Canada
- Janelle Bowman, Pharmacy Resident 2002-03
- Regina Qu'Appelle Health Region

Background: The Regina Qu'Appelle Health Region (RQHR) NICU's vancomycin dosing protocol was developed in 1988 and was used indiscriminately. Although standardised regimens for dosing vancomycin in adult populations exist, a variety of regimens for the neonatal population are proposed in the literature. Further, it is common practice to only monitor trough levels in adult patients receiving vancomycin; however, this practice has not been fully adopted in the neonatal population. Based on this, a review of the current RQHR NICU vancomycin dosing regimen, including assessment of serum level determinations, was warranted.

Purpose: To optimise the dosing and therapeutic drug monitoring of vancomycin in the neonatal population in the Regina Qu'Appelle Health Region

Methods: The first phase of the study was an extensive search & review of the literature from 1980 to present to determine if a gold standard or recommended procedures for the dosing and monitoring of vancomycin existed for neonates. In addition, vancomycin protocols for neonates were requested from institutions across Canada. The next phase of the study involved a retrospective chart review of patients who received vancomycin in the RQHR NICU. The third phase of the study was an assessment and analysis of the information obtained from the literature review, protocols from other institutions and the retrospective chart audit. The fourth phase of the study involved setting up a meeting with the four neonatologists and the two pediatricians who cover the NICU at the RGH to discuss the findings & determine whether changes to the current protocol were warranted.

Results: Twenty different vancomycin dosing regimens were identified: 14 were found in the literature review with an additional 6 from protocols from other Canadian institutions. The retrospective chart review confirmed the vancomycin regimen and serum level determinations did not follow the current RQHR protocol recommendations. Doses from 3-22mg/kg and intervals ranging from 8-24 hours were used. Twenty patients had both a peak and a trough level drawn, of which only 55% had a trough between 5-12mg/L. Ninety-five percent, however, had a peak between 20-40mg/L. Using the pharmacokinetic calculations from these levels, ten alternate regimens were evaluated to determine the extrapolated peaks and troughs which would have resulted, if these alternative regimens had been used. The regimen used at the Kingston General Hospital provided 70% of patients with a trough between 5-12mg/L and 95% with a peak between 20-40mg/L. Seventy percent had both a peak and a trough in the desired range. The regimen currently recommended by the RQHR protocol, however, resulted in only 40% of patients with a trough of 5-12mg/L; 30% of the troughs were above and 30% were below this range. Only 10% of patients obtained a peak between 20-40mg/L using the RQHR regimen; 90% of patients had a peak >40mg/L. The results of the study were

presented to the neonatologists along with the proposed changes to the protocol.

Conclusion: Although there is no clearly established best practice for dosing and monitoring vancomycin in the neonatal population, the regimen suggested by the Kingston General Hospital appears to provide an optimal number of peaks and troughs in the desired therapeutic ranges. Although trough only monitoring may be an acceptable option, peak and trough levels will continue until a review of the new regimen is undertaken in one year.

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Accuracy of Weights Used to Dose Enoxaparin, Eptifibatide, Tirofiban and Tenecteplase in the Regina Qu'Appelle Health Region: The Impact on Therapeutic Outcomes in Acute Coronary Syndromes

Allison Marcil BSP, Pharmacy Resident 2002-2003
Regina Qu'Appelle Health Region

Background: The evolution of drug therapy has resulted in the development of potent new agents with narrow therapeutic windows. Included in these are a number of antithrombotic agents. Clinical trials have demonstrated that the dose used per kilogram of body weight is critical to the efficacy and safety of these drugs. As the dose per kilogram is critical, it follows that the accuracy of the weight used to dose these drugs is also critical. This study examined the origin and accuracy of the weights used to dose four drugs with narrow therapeutic windows: enoxaparin, eptifibatide, tirofiban and tenecteplase.

Purpose: The purposes of this study were to determine the origin of weights used for dosing enoxaparin, eptifibatide, tenecteplase and tirofiban and assess whether this weight was sufficiently accurate to safely and effectively dose these agents in patients admitted with an acute coronary syndrome in the Regina Qu'Appelle Health Region (RQHR).

Methods: All patients admitted to a RQHR tertiary care hospital initiated on enoxaparin, eptifibatide, tirofiban or tenecteplase for an acute coronary syndrome within the first quarter of 2003 were eligible for study inclusion. Within 48 hours of drug initiation, eligible patients were approached for consent to participate in the study. Patients were asked their weight then weighed. Serum creatinine, target drug, hospital, hospital ward, dose administered, dosing weight, and all weights listed in the patient chart were also recorded. Interventions were made and documented as necessary.

Results: Of the 34 patients participating in the study, sixteen (47%) of patients had an actual (versus estimated) weight in their medical chart. Discrepancies in patients' stated versus actual weights ranged from 19 kilograms underestimation to 8 kilograms overestimation (mean difference 0.73(4.63,t=1.099:NS). Eighteen patients (52.9%) had a weight discrepancy between their stated and actual weights of 0 to 2.4kg. Five patients (14.6%) had a weight discrepancy between 5 and 9.9kg. One patient (2.9%) had a weight discrepancy between 17.5 and 20kg. Dose changes were required in ten patients (29.4%) patients. Three (8.8%) of these patients had the wrong dose chosen from the pre-printed order forms based on the weight used and seven (20.5%) of these patients required a dose change after an actual weight was obtained.

Conclusions: Given the vast range across the therapeutic and non-therapeutic spectrum seen with each study drug, the discrepancies in patients estimated versus actual weights and the need for interventions in 20.5% of patients studied due to weight inaccuracies,

it would seem prudent to obtain actual weights in patients prescribed enoxaparin, eptifibatide, tirofiban and tenecteplase in order to optimize therapeutic outcomes and minimize adverse effects.

Mel & Barry's Picks:

- Check out this comprehensive website for healthcare professionals out of the University of Alberta. It has a number of great resources and educational videos. www.webmedtechnology.com
- Your link to the Canadian Diabetes Guidelines: www.diabetes.ca/cpg2003
- A neat little journal - Bandolier: www.jr2.ox.ac.uk/bandolier/index.html
- Sign up for Today's Health Clips – a newsletter from The Health Quality Council www.hqc.sk.ca/health_clips.php. It provides information on local happenings as well as journal links.
- The World Health Organization essential medicines list: mednet3.who.int/Eml/
- Get Instant Access to the Minds of Medicine & Free CME at www.emedicine.com. This is a great site for disease information & great pictures!

What's Up?

This section is to let members know what has been happening with your colleagues over the last few months.

Congratulations to the following Award and Grant winners; Tejal Patel and Bill Semchuk are the recipients of the CSHP Research and Education Foundation Grant for the study titled "Impact of a Collaborative Care Model in a Medications Optimization Clinic: A Randomized, Standards-care Controlled, Prospective Study"

At PPC, Garry King was the 2004 recipient of the Isabel E Stauffer Meritorious Service Award. This award recognizes members of the Society for significant, sustained contributions to CSHP, primarily at the branch or chapter levels.

The Warfarin Management Team of the Five Hill Health Region was a winner of a Stellar Award for Quality, Champion Category from the Health Quality Council. The Stellar Awards for Quality are given to individuals, teams, units, or organizations that have demonstrated excellence in improving care or the caring experience for patients and providers in Saskatchewan. Here's a link to the press release for the FHHR award winning warfarin management program: <http://www.hqc.sk.ca/common/pdfs/Profile-for-Warfarin.pdf>

Appointments: Effective February 2, 2004, Joyce Walker and Karen Kaptein will be joining the SAHO Pharmacy Committee. Garry King will also sit on the Pharmacy Committee in a special advisor capacity. Thank you very much for committing your time and expertise to serve on this committee.

Births: SK. Branch CSHP would like to extend their congratulations to Jenelle Heroux (Awards Chair) and her family on the birth of her daughter on March 15th.



MANAGER - PHARMACEUTICAL SERVICES
ROYAL UNIVERSITY HOSPITAL

(PERMANENT FULL-TIME)

POSITION SUMMARY: Reporting to the General Manager, the Manager is responsible for leading, developing, organizing and coordinating inpatient, outpatient and contracted pharmacy services at Royal University Hospital. This includes accountability for the quality, quantity, legality, and cost-effectiveness of services provided. The department provides patient care services, drug information and drug use evaluation services, education to pharmacy residents, students and technicians, and supports clinical drug trials and research. Services include computerized unit-dose, centralized IV admixture and automated parenteral nutrition programs primarily supported by pharmacy technicians.

THE PERSON: As a Manager, you will have credibility as a leader amongst your peers with a demonstrated commitment to excellence and the ability to be a change agent and innovator. In addition to your baccalaureate degree in Pharmacy, you will have completed a Hospital Pharmacy Residency program, be eligible for licensure with the Saskatchewan Pharmaceutical Association and possess several years' supervisory or management experience in a Hospital setting. In addition, you must demonstrate excellent communication, teaching and organizational skills, and the ability to motivate and manage staff in a team environment.

If you possess the above qualifications, then we invite your candidacy. For detailed position-specific information, please contact Janet Harding at 655-2279.

Please submit your resume in confidence by May 1, 2004 to: Barry Barss, Employment Facilitator, Human Resources, Saskatoon Health Region, Royal University Hospital, 103 Hospital Drive, Saskatoon, Saskatchewan, Canada, S7N 0W8; Phone (306) 655-2132; Fax (306) 655-2444 or (306) 655-2443; E-mail: jobs@saskatoonhealthregion.ca

Please quote competition #03-04-1585-0

Saskatoon Health Region is committed to a representative workforce of Aboriginal people. Candidates are encouraged to self declare in writing that they are a member of the designated group.

The successful applicant will have to provide a satisfactory criminal record screening before any offers of employment.

Saskatoon Health Region thanks all applicants, but only those chosen for interviews will be contacted.