The Resident Star
By The University of Washington
Community Pharmacy Residents

February 2013

Pharmacy Residents as part of the Interdisciplinary Team at Providence Home Health Snohomish
By Shannon Puckett, Pharm.D. (Valley View Pharmacy)

The role of the pharmacist as part of the interdisciplinary team has been a considerable topic as part of our society’s health care debate on how to reduce costs, prevent hospital readmissions, and efficiently deliver more preventative and patient-centered care. It has been reported that medication related problems account for 1.4-15.7% of preventable hospital admissions.1 Pharmacists are the experts at identifying, resolving, and preventing medication-related problems. It is only logical to have a pharmacist as an integrated role in settings such as home health, hospice, and long-term care to screen for drug therapy problems in these high-cost and high-risk patient populations.

Providence Home Health and the pharmacy residents have recently launched a pilot project for involvement of the pharmacist on the home health team in an effort to prove the clinical and economic benefits of the pharmacist in primary care. Pharmacy residents will attend team meetings each week for high risk patient review, interdisciplinary collaboration, and consultations. Chart reviews will be conducted to identify gaps in medication management and provide medication reconciliation. Pre-determined high risk populations include diagnosis of heart failure, diabetes, lung disease, or depression, recent hospital discharge, and patients determined at high risk for re-hospitalization. Patients on complicated medication regimens will also be reviewed. The project aims to improve patient outcomes, optimize medication regimens, and reduce hospital readmissions and health care costs for these high risk patients. A capstone presentation to senior leadership and pharmacy administration will be given by pharmacy residents at the conclusion of the pilot project in June. Research hopes to provide evidence to support full time pharmacist employed by Providence Home Health.


In This Issue:

(Residency Program #1) Page 1
• Resident Project
• Clinical Service

(Residency Program #2) Page 2
• Resident Project
• Clinical Service

(Residency Program #3) Page 4
• Resident Project
• Clinical Service

(Residency Program #4) Page 3
• Resident Project
• Clinical Service

Calendar of Upcoming Pharmacy Meetings & Events Page 3

Resident Clinical Service
Gestational Diabetes: Education and Nutrition

According to estimates by the American Diabetes Association (ADA), up to 18% of pregnant women meet current diagnostic criteria for Gestational Diabetes Mellitus (GDM). Long term complications include: maternal risk for developing non-insulin dependent diabetes mellitus and fetal morbidity. This past month, Providence Medical Group Monroe Midwifery approached pharmacy residents to request assistance with managing newly diagnosed GDM patients who are diet controlled. The closest diabetes nutrition education for these patients is in Everett and is a barrier to our philosophy of patient-centered medical care. Emily and I were delighted to help fill this role.

Last week I was fortunate enough to spend an afternoon with a dietician in Everett who provides GDM diet education. Key dietary highlights include: only 300 additional calories per day, restricting fruit intake to lunch/dinner, eating every four hours, and to have two carbohydrate servings for breakfast and three to four carbohydrate servings for lunch and dinner. Fruit servings are limited to either lunch and/or dinner as placental hormone levels and insulin resistance is highest in the morning. This collaboration has been a rewarding and educational opportunity for both Emily and I. We have provided gestational diabetes education and meter teachings to two GDM patients and look forward to continuing this new clinical service at PMG.

Department of Pharmacy
University of Washington, Box 357630
H375 Health Science Building
Seattle WA 98195-7630
Phone: (206) 543-6788
Teaching Diabetes Care– A Real-Life Journal Club Exercise

This quarter, I am assisting in Pharmacy 588 – Diabetes Care, an elective course for PY3 student pharmacists at UW. I created a new course activity in which student pharmacists worked in groups to answer a “hot topic in diabetes” clinical question by critically analyzing the literature. The learning objectives of the session were:

• Efficiently and effectively search information resources to retrieve the best available evidence to answer the clinical question
• Critically appraise evidence and gain a full understanding of study results
• Integrate the evidence with all aspects of individual patient decision making to determine the best clinical care options for the patient

Students were assigned a case, and provided with one primary reference. In their group, they searched the literature to identify additional references to help answer the case. The following week in class, the students were divided into new groups to discuss the cases and their findings.

Case topics included in this session were:

• Pharmacogenomics: Pt with T2DM used a service called 23andMe, and is wondering if there are any genes in his 23andMe profile that might impact his metformin and glipizide doses.
• Bariatric Surgery vs. Conventional Therapy: Pt doesn’t like injectables and asks for your professional opinion about risks/benefits of bariatric surgery.
• Insulin Degludec/Insulin and Cancer: Pt wants to switch to “3 day insulin” but has also heard about the risk of insulin causing cancer and wants you to explain.
• Sodium-Glucose Transporter Inhibitors in the Pipeline: A family friend wants to know your opinion if she should by stock in the companies developing them.

Students were assessed on their pre-class preparation, participation in class, and written evaluation of the literature. Hopefully, student pharmacists participating in this class got a flavor of “real life” clinical questions and literature evaluation.
### Calendar of Upcoming Pharmacy Meetings & Events

#### February 2013

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
</tr>
</tbody>
</table>
| 10
UW Pharmacy Resident Journal Club | 11     | 12      | 13        | 14       | 15     | 16       |
| 17     | 18     | 19      | 20        | 21       | 22     | 23       |
| 24     | 25     | 26      | 27        | 28       |        |          |

#### March 2013

<table>
<thead>
<tr>
<th>Sunday</th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
<th>Saturday</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>APhA Meeting</td>
<td>APhA Meeting</td>
<td>APhA Meeting</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
<td>APhA National meeting in Los Angeles</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>17</td>
<td>18</td>
<td>19</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>23</td>
</tr>
<tr>
<td>24</td>
<td>25</td>
<td>26</td>
<td>27</td>
<td>28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
To recap, the IMPACT study evaluates a pharmacist-managed anticoagulation program and its effect on co-morbidities in a Native American population. Our primary aim is to compare the percentage of therapeutic-range international normalized ratio (INR), blood pressure (BP), and hemoglobin A1C (A1C) measures pre- and post- program initiation. Our secondary aims are to: 1) evaluate the safety and adequacy of pharmacist-management of supra-therapeutic INRs and associated symptoms; 2) explore factors related to maintaining therapeutic INR and co-morbidity measures; and 3) explore program satisfaction. The study includes tribal members over 18, who are currently receiving anticoagulation therapy, while those unable to give informed consent are excluded. Specific outcome measures are: percentage of therapeutic-range INR, BP, and A1C values; contributing factors for stability of these measures; adherence; and patient and provider program satisfaction. The IMPACT study is currently pending IRB approval as it was again modified to add the following measurement: Hospitalizations (number, length of stay, reason for hospitalization, and discharge orders for anticoagulation therapy). This is an important parameter to measure to illustrate that our anticoagulation clinic may provide additional depth to safety evaluation. This addition will require medical chart review prior to start of study to collect hospitalization records.

Recently, we have implemented a home visit service that allows pharmacists to manage patients, who are unable to come to the clinic. The service started with an anticoagulation patient, who found it very difficult to return to clinic weekly due to being bed-bound. This prompted the pharmacy team to propose to the provider and patient’s caregiver that pharmacy residents would perform home visits to patients who require or request them. Since then, this program has assisted a diverse array of patients, ranging from those with cancer to those recently discharged from the hospital. Each home visit lasts 30-45 minutes, where a comprehensive medication review would take place, and may involve anything from anticoagulation care to insulin dosing appreciation of the service residents perform and have requested us by name. As for the residents, it has been an invaluable and rewarding experience. Overall, the program is expanding and has received support from the Tulalip Health Clinic providers as well as the community.

Patient comment from our Pharmacy-led home visits

“I really appreciate you guys coming out every week to check on us. My mom has been looking and feeling better and everything is much more stable.”
Evaluation of a Diabetes Education Program for Independent Living Seniors

By Matt Weisser, Pharm.D. (Bartell Drugs)

This study will assess the clinical and humanistic impact of a community-based, pharmacist driven diabetes education program to independent living seniors. The primary objective of this study is to assess the effect of a diabetes education program on blood pressure, fasting blood glucose, hemoglobin A1c, and fasting lipid panel results from beginning to end of study. Secondary objectives will assess the effect on diabetes knowledge gained from beginning to end of study and participant satisfaction with the education program. The study includes male and female residents of Arrowhead Gardens senior apartment community who list pre-diabetes or type 2 diabetes as a medical condition, are 18 years of age or older, and provide written consent.

The program consists of 3 diabetes educational classes (Introduction to Diabetes and Monitoring Your Blood Sugar, Lifestyle Modifications, and Understanding Your Medications and Living with Diabetes). Additionally, participants will have the option to receive pre and post-study measurement of blood pressure and finger stick testing (fasting blood glucose, fasting lipid panel, hemoglobin A1c). It is anticipated that this study will enroll approximately 30-50 individuals and will run from February through April. This study is currently pending IRB approval but is expected to be received by early February.

Resident Clinical Service

International Travel Medicine at Bartell Drugs

With many individuals traveling abroad this winter either to escape the cold or seek new adventures, many are taking the necessary steps to help ensure their travel is both safe and enjoyable. In addition to obtaining passports, travel insurance, and completing other necessary tasks prior to travel, an increasing number of individuals are receiving travel medicine consultations.

Having emerged over the last two decades, travel medicine is focused on the health of travelers who visit foreign countries. Increasingly, pharmacists are providing these travel medicine consultations through collaborative practice agreements with physicians. At Bartell Drugs, there are 11 locations that offer this service. For each consultation, the would-be traveler is requested to complete a travel clinic questionnaire that gathers information on the traveler’s itinerary with date(s) of arrival and departure, medical history, allergies, prescription and OTC medication use, and vaccination history. Additionally, the would-be traveler is also asked about travel medical history including previous malaria infection, traveler’s diarrhea, and altitude and motion sickness.

Once the questionnaire is completed, the pharmacist begins a thorough workup of the patient and their travel destination. The pharmacist then formulates recommendations based on the most current CDC Yellow Book and Tropimed® Travel Health software recommendations for vaccinations, malarial prophylaxis, treatment of traveler’s diarrhea, and altitude and/or motion sickness, if applicable.
Residency Site Directors

Bartell Drugs Program
Rachel Allen, Pharm.D
Clinical Care Coordinator
Bartell Drugs
rachela@bartelldrugs.com

QFC Program
Marci J. Reynolds, Pharm.D
Clinical Care Coordinator
QFC Pharmacy
marci.reynolds@qfci.com

Tulalip Program
Asaad Awan, Pharm.D
Director, Tulalip Clinical Pharmacy
aawan@tulaliptribes-nsn.gov

Valley View Program
Steve Erickson, Pharm.D
Preceptor, Valley View Clinical Pharmacists
Providence Everett Health System
Steven.erickson@providence.org

UW Community Pharmacy Residency Program Personnel:

Amber Glass, R.Ph, MPH
Director, UW School of Pharmacy Residency Programs
Clinical Assistant Professor
aglass2@u.washington.edu

Don Downing, R.Ph
Assistant Director, UW School of Pharmacy Residency Programs
Professor of Pharmacy
dondown@u.washington.edu

Peggy Odegard, Pharm.D
Chair, Department of Pharmacy
Professor of Pharmacy
podegard@u.washington.edu

University of Washington