Case Two: Six medications were intervened upon by MTM call center pharmacists after a patient’s medication history was reviewed. Specific interventions accepted by the prescriber included: combining multiple medications to a single medication for the purpose of decreasing pill load and discontinuing medication due to duplicate therapy. Assuming all medications were maintenance medications and the patient would be in full compliance with the recommended medications for the next 12 months, the total pharmacy saving for this case would be $1,019 per year.

Case Three: A patient was identified as HIV positive through drug inference and confirmed by the physician. MTM call center pharmacists recommended adding an NRTI in accordance with national guidelines. MTM pharmacists also noticed the patient was noncompliant with his lipid lowering therapy, Tricor, and recommended promoting proper use of this medication. The total added drug cost from these recommendations would be $3,695 per year. However, incorporating the NRTI into the drug therapy could result in $10,000 per year savings in medical cost in accordance with literature. In this particular case, the net savings in overall health care expenditures could be $6,305 per year.

Overall, the WHS polypharmacy MTMP identified 359,124 Medicare Part D members eligible for the program in 2006. However, only about 5% of the qualified members were enrolled in the program largely due to the chosen opt-in program design.

The WHS polypharmacy MTMP provided appropriate therapy recommendations to the patients’ physicians, addressed compliance and persistency issues, and optimized drug therapy. Drug therapy outcomes have been improved by ensuring efficacy and minimizing toxicities through decreasing the number of drug conflicts (e.g. drug interactions, duplicate therapy). According to literature, clinical outcomes may be improved as a consequence of this intervention. In addition to bringing better health outcomes, the WHS polypharmacy MTMP could also reduce both pharmacy and medical health care expenditures.

Lessons Learned: The WHS Polypharmacy MTMP participation rates varied by the plan design. Overwhelmingly, those plans with a polypharmacy MTMP opt-out design had a much higher patient participation rate in comparison to plans with an opt-in design (82.26% vs. 4.43%). Possible reasons for the low member participation rate in the opt-in model include members having difficulties understanding the benefits and opt-in invitations being discarded with the materials that members did not see as pertinent.

Results: We identified 78 members who received growth hormone in the first quarter of 2006, letters were sent to 35 members who met the criteria of inappropriate use. This resulted in 28 blocks and based on that the yearly savings was approx. $400,000. This also included identifying 17 prescribers who were not using growth hormone according to FDA approved indication and were referred to investigation department for reviews.

Conclusions/Lessons Learned: The program was very effective in identifying a potential problem of inappropriate utilization and helped the organization both clinically and financially. Integration of pharmacy and medical data provided evidence to take measures for inappropriate utilization.

**PCASE9**

**MANAGEMENT OF INAPPROPRIATE USE OF GROWTH HORMONE**

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Horizon Blue Cross Blue Shield of New Jersey, Newark, NJ, USA

**Organization:** Horizon Blue Cross Blue Shield of New Jersey

**Problem or Issue Addressed:** Inappropriate use of growth hormone.

**Goal:** The goal of the program was to identify off label use of growth hormone.

**Outcomes items used in the decision:** Pharmacy and medical data with diagnosis was used for identification.

**Implementation Strategy:** Members receiving growth hormone were identified by using Pharmacy and medical claims data. The physicians prescribing these members were also identified. Communications were sent to members and Physicians who did not meet the FDA approved criteria or the diagnosis. Based on the responses the next step was either discontinuation or further investigation.

**Results:** The study is currently underway.

**Lessons Learned:** Health plans will increasingly be required to develop coverage and reimbursement policies for genetic tests, which can present a complex balance of benefits, risks, and costs. Because sufficient evidence for decision-making may not be avail-

**PCASE10**

**SHOULD GENETIC TESTING BE USED TO GUIDE WARFARIN THERAPY?**

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**Organization:** Intermountain Healthcare, an integrated health care system based in Utah, coordinated by its Clinical Genetics Institute (CGI), in collaboration with researchers at the University of Washington.

**Problem or Issue Addressed:** Warfarin is an effective anticoagulant but has significant bleeding risk. Recently variants in two genes, CYP2C9 and VKORC1, have been shown to have a significant impact on the pharmacokinetics and pharmacodynamics of warfarin, accounting for significant variability in effective dose between individuals. Though determination of variants of these genes, when performed in a timely manner, can be incorporated into the algorithm used to determine starting dose of warfarin, it is not clear whether the additional resources required provide meaningful clinical benefit.

**Goals:** The CGI hopes to use this project as a pilot to introduce clinically useful, cost-effective (CE) genetic testing into the Intermountain system, as well as developing methods that can be used to make coverage decisions by the system’s health plan. The primary goal is to determine both the clinical and economic value of adding testing for these genes into the warfarin dosing algorithm, in the setting of a community-based hospital, in order to inform decisions about the use and coverage of the testing. The secondary goal is to use this pilot to help educate stakeholders in the principles of cost effectiveness.

**Outcomes items used in the decision:** The primary endpoints are the differences in the total cost of anticoagulation-related care, the cost per adverse event avoided, and the cost per day within therapeutic range.

**Implementation Strategy:** The intent is to use the results from the cost effectiveness study in conjunction with the results of the clinical trial, to bring the health plan decision makers together with the delivery-side decision makers to make a coordinated decision, explicitly including local economic outcomes, about both the use of and reimbursement for CYP2C9 and VKORC1 testing in this setting. These efforts will be applied in the context of the principles of process improvement and clinical decision support, both integral parts of Intermountain’s culture, to ensure their consistent and efficient application.

**Results:** The study is currently underway.

**Lessons Learned:** Health plans will increasingly be required to develop coverage and reimbursement policies for genetic tests, which can present a complex balance of benefits, risks, and costs. Because sufficient evidence for decision-making may not be avail-