received a high score, and was funded in time to develop and implement the measurements before the changes began. Study measures required extensive cooperative efforts by the payers and medical groups, which were made possible by the ongoing integration of the initiative and the research and because all participants recognized the value of the measurements for assessing the effects and aiding decisions to maintain and extend the payment changes. **Conclusions:** It is possible to fund and evaluate even extensive change projects if developed collaboratively and flexibly with operational leaders in such a way as to provide information they value. Luck helps too.

Health Informatics

Abstract C-C3-01
Assessing the Use of an EMR Prompt for BMD Testing in Rheumatology

Jody M. Jackson, RN, BSN, *HealthPartners Research Foundation*; Cheri J. Rolnick, PhD, MPH, *HealthPartners Research Foundation*; Jerry H. Amundson, BS, *HealthPartners Research Foundation*; Richard Kopher, MD, *HealthPartners Como Clinic*

Background: We conducted a multi-phase project to examine issues surrounding bone health following the Women's Health Initiative (WHI) findings. Phase One involved surveying women regarding behaviors and concerns related to menopause management, and Phase Two involved surveying providers regarding these same issues. In Phase Three we developed a bone mineral density (BMD) testing prompt within the electronic medical record (EMR). Phase Four assessed whether the prompt made a difference in the number of patients at risk who received BMD and/or a bone health medication. **Methods:** Rheumatology patients were our target population (key priority for the health plan). All patients were age 40+, on prednisone, with no record of BMD in the previous two years. The Prompt: The following message appeared in the EMR: 'This patient is at risk for osteoporosis due to prednisone use. We have no record of a recent Dexa scan.' Data was obtained on BMD testing, prednisone use and treatment within the following time periods: 6-3 months and 3-0 months pre-prompt and 0-3 months and 3-6 months post-prompt. The proportions for whom BMD testing was ordered and/or who were on a bone health medication were determined; data were analyzed to assess if percentages were the same, decreasing or increasing. rheumatologists were asked the value of continuing its use. **Results:** BMD testing proportions were quite low in all periods but showed a slight increase over time (from periods 3-0 months pre and 0-3 and 3-6 months post). The use of prednisone was the same over time. Bone health medication was fairly consistent with a very slight increase in percentage use over time. These figures did not reach statistical significance. Providers reported the prompt was more of a hindrance than a help; it could not be tailored enough where clinical intervention was relevant. Due to the lack of enthusiasm, we dropped the alert. **Conclusions:** While prompts to providers seem beneficial in theory, putting them into practice has challenges. Providers do not always find them adequately tailored and report that too many competing reminders become distracting.

Abstract C-C3-02
The Next Step: Achieving Health Behavior Change Through Technology

James B. Jones, MBA, *Geisinger Center for Health Research*; Nirav R. Shah, MD, MPH, *Geisinger Center for Health Research*; Zahra S. Daar, MS, *Geisinger Center for Health Research*; James Walker, MD, *Geisinger Center for Health Research*; Ilene G. Ladd, MS, *Geisinger Center for Health Research*; Walter F. Stewart, PhD MPH, *Geisinger Center for Health Research*

Background: Web-based technologies offer an efficient patient-centered means of educating patients and improving their chronic disease self-management skills. Our objective was to engage patients in the use of an internet-based health behavior change program. **Methods:** We tested the effectiveness of a web-based behavior change application designed by HealthMedia, Inc. (HMI) in patients with cardiovascular disease, diabetes, and/or heart failure. Eligible patients were required to be registered users of MyGeisinger, a web-based patient portal used to access medical information, communicate with providers, and review test results. Patients randomized to the intervention group received multiple letters and e-mails inviting them to use HMI's behavior change tool. Control group patients did not have access to the HMI application. Given the low initial response rate (only 11.9% enrolled in the HMI application), we conducted a phone survey of 30 non-enrollees. The survey included 35 questions about internet usage, MyGeisinger usage, and reasons for not enrolling in the HMI system. **Results:** All respondents reported having access to an internet-connected computer. Ninety percent of the respondents indicated that they accessed the internet 2-7 times per week. Seventy percent of respondents reported that they were active users of MyGeisinger. The most common reasons for not using the HMI system included: not knowing the physician who signed the letter inviting them to participate in the study (67%), technical problems with the computer, website, login or pop-up windows (67%), and needing more information about the intervention (43%). **Conclusions:** The target population (i.e., comfortable using a web-based patient portal) for an internet-based behavior change tool was easy to identify. Several barriers remain to get these technology-savvy users to additionally adopt a web-based behavior-change application. In a separate analysis of MyGeisinger usage, 86% of the intervention group used MyGeisinger three or more times during a 12-month period. We conclude that motivating patients to use an electronic health tool that provides a platform for exchanging information (e.g., MyGeisinger) is fundamentally different from engaging patients in electronic health tools for health behavior change. There is a need to reduce and/or eliminate the technical hurdles and to develop better ways of providing information to prospective users about the purpose and benefits of web-based behavior change tools.

Abstract C-C3-03
Implementation of Electronic Decision Support for Providers to Improve Diabetes Care

JoAnn M. Sperl-Hillen, MD, *HealthPartners Research Foundation*; Patrick J. O'Connor, MD MPH, *HealthPartners Research Foundation*; Heidi L. Ekstrom, MA, *HealthPartners Research Foundation*; William A. Rush, PhD, *HealthPartners Research Foundation*; Paul E. Johnson, PhD, *University of Minnesota*; George Biltz, MD, *University of Minnesota*

Background: An electronic decision support tool called Diabetes Wizard (DM Wizard) was implemented in four HealthPartners Clinics from October 2006 through May 2007 as part of the NIDDK funded study entitled 'Reducing Clinical Inertia in Diabetes Care.' The DM Wizard was integrated into the electronic health record (EHR) as an EPIC smart form and accessed through the visit navigator screen at a patient's encounter. It was also printed for provider review prior to entering the exam room. It gave clinically relevant data on the patient's A1c, blood pressure, lipids, and relevant comorbidities. In addition, it was programmed using complex algorithms derived through expert consensus to list 3-4 specific recommendations for drug intensification along with safety alerts and reminders for each of the three clinical domains. **Methods:** Sixty-one providers were randomized at the clinic level to one of three study arms: (1) Control (2) SimCare Plus (a simulated case-based learning program for providers) or (3) DM Wizard. Six clinics received staff training and, for 6 months, received feedback, utilization reminders and paid incentives for DM Wizard use. Providers also completed a 'visit action resolution' form (a checklist of reasons for clinical inertia). A provider survey assessed satisfaction. The following were tracked electronically during the 6-month intervention and incentive period, and for 3 months after: (1) rate of opening the DM Wizard at eligible encounters (all visits of patients with diabetes) (2) rate of nurse printing the DM Wizard for the provider (3) rate of provider completion of the visit resolution form. **Results:** One hundred percent of providers agreed with listed treatment suggestions and would recommend use of the DM Wizard to other physicians. The form printed by the nurse and available prior to entering the exam room was seen as valuable by most providers. The DM Wizard was opened during eligible diabetes encounters 75% of the time, with printing and visit resolution completion rates of 88% and 87% of opened forms, respectively. Three months after the incentive period, rates of opening the DM Wizard dropped to 50%. **Conclusions:** The DM Wizard EHR tool was implemented successfully with high provider use rates and satisfaction. Use declined substantially after the study intervention period correlating to discontinuation of feedback, reminders, and incentives. The cost of maintaining high rates of DM Wizard utilization and keeping algorithms up to date will need to be weighed against the clinical benefits achieved.