sensitivity analyses were performed for all key parameters across the three time horizons and different percentages of drug provision (5%, 10% and 15%). **RESULTS:** For 1190 patients, we expect health system costs of $75 million over a 10-year horizon and $120 and $142 million over 20 and 30 year horizons (2012 CAD$). We estimated 580 deaths over 30 years, of which 52% will be due to HCV. Antiviral treatment will have been received by 1097 patients and 184 will have received a liver transplant. The sensitivity analysis shows that fibrosis stage at diagnosis will have the greatest impact on costs. Other key variables generating costs were liver-related morbidity and transplants. The need for transplants decreases when antiviral use increases. This offsets antiviral drug costs. **CONCLUSIONS:** Our model indicates that the amount of resources required by a single cohort of Albertans is substantial. The model also provides a resource which planners can use to estimate funding, as they will be responsible for allocating the resources needed to treat HCV.

PHS69

ESTIMATING HEALTHCARE RESOURCE USE ASSOCIATED WITH THE TREATMENT OF METASTATIC MELANOMA IN EIGHT COUNTRIES

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OBJECTIVES: This study estimated the healthcare resource use (HRU) associated with the treatment of metastatic melanoma (stages IIIB–IV) in Australia, Canada, France, Germany, Italy, the Netherlands, Spain, and the UK. **METHODS:** Using published literature and clinician opinions, four treatment phases for metastatic melanoma were identified: active treatment (pre-progression), disease progression, best supportive care (BSC) or palliative care, and terminal care. The elements of HRU for each phase were identified. For most elements, estimates of the magnitude and frequency of use in clinical practice were not available from published literature and were obtained in 2014 through Delphi panels in each country, comprising up to eight experienced oncologists who treated patients with metastatic melanoma. **RESULTS:** Medical oncologists are the key care providers for patients with metastatic melanoma in all countries studied except Germany, where dermato-oncologists can also lead care. Each patient was estimated to require 1–2 consultations per month with a medical oncologist during active treatment phase. HRU during active treatment phase included an average of 1.16 physician consultations (range: 0.65–2.70), 1.23 CT imaging scans (0.88–1.5), and 1.35 day-hospital visits (0–2.7) per 3 months across all countries. HRU was intensive during disease progression phase, including an average of 0.47 inpatient admissions and 1.23 radiotherapy fractions. The use of palliative and hospice care during the BSC/palliative and terminal phases varied across countries. **CONCLUSIONS:** This study generated estimates of healthcare resource use in managing patients with metastatic melanoma using a consistent, robust methodology across eight countries. The estimates of magnitude and frequency of healthcare resource use were substantial and varied for some resources, particularly those used after disease progression.

PHS70

ASSOCIATION OF CHANGE IN FORCED VITAL CAPACITY WITH HEALTHCARE RESOURCE UTILIZATION IN PATIENTS WITH NEWLY DIAGNOSED IDIOPATHIC PULMONARY FIBROSIS

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OBJECTIVES: This study assessed the association between forced vital capacity (FVC) change post-diagnosis of idiopathic pulmonary fibrosis (IPF) and healthcare resource utilization (HRU) in patients with newly diagnosed IPF. **METHODS:** A retrospective chart review was conducted by US pulmonologists using an online case report form for patients diagnosed with IPF from 01/2011-06/2013. Patient eligibility criteria included: 1) ≥40 years old at IPF diagnosis; 2) IPF confirmed by lung biopsy and/or high-resolution computed tomography; 3) FVC results at diagnosis and ~6 months following diagnosis. Based on relative change in FVC percent predicted (FVC%pred), patients were categorized as stable (decline<5%), marginal decline (decline 5-9%), or significant decline (decline≥10%). Physician-reported IPF-related HRU included visits for urgent care or suspected acute exacerbation (AEx) and hospitalization. All outcomes were assessed from six months post-diagnosis to end of observation. HRU rates by FVC decline group were estimated and compared using unadjusted negative binomial regression, controlling for varying follow-up periods. A multivariable Cox model was constructed to assess risk of hospitalization post-FVC decline. **RESULTS:** The sample included 490 IPF patients from 168 pulmonologists with 250 (51%), 98 (20%), and 142 (29%) patients in the stable, marginal decline, and significant decline groups, respectively. At diagnosis, the mean age was 61±11 years, 68% were male, and the mean FVC%pred was 60±26%. The mean observation time across patients was 583±287 days. Groups with greater FVC decline exhibited higher rates of hospitalization and visits for urgent care or suspected AEx. Multivariable analysis showed that the significant (HR=3.6 [95%CI: 2.0-6.6]) and marginal decline (HR=2.4 [95%CI: 1.2-4.8]) groups were associated with higher risk of hospitalization than the stable group. **CONCLUSIONS:** Our findings suggest that greater FVC decline in the first six months post-diagnosis is associated with increased IPF-related HRU. Management options for IPF that slow FVC decline may help lessen future IPF-related HRU.

PHS71

BURDEN OF MELANOMA AMONG ADULTS ENROLLED IN MEDICAID PROGRAM

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OBJECTIVES: Melanoma is the most common kind of cancer in the United States. Low socio-economic status is associated with a diagnosis of melanoma at an advanced stage and higher mortality. The objectives of this study were to examine the healthcare resource utilization and treatment profile of adults with melanoma enrolled in Medicaid program. **METHODS:** The 2006-2008 Medicaid data for 36 states were used for the purpose of this study. A retrospective matched cohort study design was used. Study sample included individuals who were continuously enrolled in the Medicaid managed care program from 2006 to 2008, were between 18 to 65 years of age during the study period, had no previous history of cancer and had at least one inpatient and/or two outpatient claims for melanoma. Propensity scores were used to match melanoma patients with non-cancer controls (1:2 ratio). Melanoma-related healthcare use was determined in terms of inpatient (IP), emergency room (ER) visits, outpatient (OT) visits. Drug and treatment use (surgery or radiation therapy) was also studied. Wilcoxon rank sum tests were used to compare all-cause resource use between melanoma cases and non-cancer controls. **RESULTS:** 14,750 incident cases of melanoma in 2007 were identified. In terms of age, gender, and region, most were white (63.91%), female (72.80%), and from the northeast (32.56%) region of the country. Mean melanoma-related OT visits were significantly lower for blacks (4.038) as compared to whites (4.383). Melanoma surgery (78.75%) was the most commonly used treatment followed by radiation therapy (63.01%). Mean all-cause IP (0.229 vs 0.215), ER (3.637 vs 1.545), and OT visits (87.272 vs 52.785) were significantly higher for melanoma cases as compared to non-cancer controls. **CONCLUSIONS:** The healthcare resource and treatment use for melanoma varied by demographic characteristics. Melanoma diagnosis was found to be associated with significant healthcare resource utilization burden.

PHS72

EXPANSION OF CURRENT HPV VACCINATION GUIDELINES TO INCLUDE MEN WHO HAVE SEX WITH MEN WHO ARE 27 YEARS OR OLDER – A VALUE OF INFORMATION ANALYSIS

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OBJECTIVES: Value of information analysis provides an analytic framework to understand prioritization of future research, and is increasingly used for research planning. Our objective was to explore the need for future research on expanding current human papillomavirus (HPV) vaccination guideline to include men who have sex with men (MSM), 27 years or older, treated for high-grade anal intraepithelial neoplasia (HGAIN). **METHODS:** We used two separate Markov models for HIV-positive and HIV-negative MSM to evaluate the inclusion of quadrivalent HPV (qHPV) vaccine as adjuvant/secondary prevention strategy in these subgroups. Using the healthcare payer's perspective, the simulation over patients' lifetimes was conducted discounting costs and benefits. We estimated the population-level expected value of perfect information (pEVPI), and population-level expected value of partial perfect information (pEVPPI) for six key model parameters—HGAIN to anal cancer progression, HGAIN regression, HGAIN recurrences, HPV incidence, vaccine efficacy, and utilities (measure of preference-based quality of life)—over the period of 20 years in the U.S. **RESULTS:** The pEVPI peaked in HIV-positive and HIV-negative MSM at the willingness-to-pay threshold (WTP) of $6,000/QALY (pEVPI was $7.3 million) and WTP of $75,000/QALY (pEVPI was $1.0 million), respectively. The pEVPI in HIV-positive and HIV-negative MSM at the economically acceptable WTP of $50,000/QALY were $0 and $714,831, respectively. The two parameters with highest pEVPPI in HIV-negative MSM at that WTP were vaccine efficacy (pEVPPI was $280,230) and HGAIN to anal cancer progression (pEVPPI was $10,807). **CONCLUSIONS:** In HIV-positive MSM, future research will be highly unlikely to change the cost-effectiveness of the vaccine; therefore implementation of the vaccination policy before the results of the ongoing clinical trials become available should be a priority. In HIV-negative MSM, a clinical trial is required before policy implementation. In both HIV-positive and HIV-negative MSM, further research is needed on estimation of HGAIN to anal cancer progression.

HEALTH SERVICES – Patient-Reported Outcomes & Patient Preference Studies

PHS73

IMPACT OF EMAIL REFILL REMINDERS ON MEDICATION ADHERENCE AMONG PATIENTS WITH CHRONIC DISEASES IN A RETAIL COMMUNITY PHARMACY

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OBJECTIVES: Adhering to prescribed medications is crucial for patients with chronic diseases to manage their conditions. However, rates of adherence to maintenance medications are often suboptimal, and forgetfulness is one of the most common reasons cited for nonadherence. Our objective is to evaluate the impact of an email refill reminder system on patient adherence to medications used to treat chronic conditions. **METHODS:** This retrospective cohort study used a propensity score matched (PSM) control group. Patients who received email refill reminders the first time in April 2013 comprised the test group. The control group included patients who did not receive the reminders and were propensity matched 1:1 to the test group based on baseline characteristics of age, gender, medications, patient fill status, baseline adherence rate, and therapeutic class. Medication adherence and persistence were calculated and compared between test and control groups in a 12-month follow-up period. Medication adherence was evaluated using continuous and categorical proportion of days covered (PDC) measures. Medication persistence was measured using days on therapy (persistence) and percent of patients on therapy. **RESULTS:** After PSM, test and control group included 14,527 patients each and their baseline characteristics were comparable. One-year PDC for patients in the test group was 2.59% higher compared to the control group (51.15% vs. 48.56%, $P < .001$). Persistence for the test group was 7.90 days higher than in the control group (236.01 vs. 228.11, $p< .001$). At the one-year follow-up, 43.79% of patients in the test group stayed on their therapy compared to 40.99% in the control group ($P<. 001$). **CONCLUSIONS:** Patients receiving email refill reminders demonstrated better adherence and persistence to maintenance medications than patients who did not receive the reminders.

PHS74
IMPACT OF APPOINTMENT-BASED MEDICATION SYNCHRONIZATION ON EXISTING USERS OF CHRONIC MEDICATIONS
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OBJECTIVES: To compare the medication adherence and persistence of existing users of chronic medications enrolled in a pharmacy chain's appointment-based medication synchronization (ABMS) program, with patients who are not enrolled in the program for the duration of one year. **METHODS:** A retrospective cohort study compared patients receiving ABMS with matched controls receiving usual standard care. ABMS consisted of an appointment to synchronize the patient's medications to be dispensed on a single appointment day every month, a call to the patient prior to the appointment day to address any prescription changes and to remind the patient, and a patient visit to the pharmacy to pick up the medication. Outcomes measured were 1-year adherence rates using proportion of days covered (PDC) and 1-year non-persistence rates. Data for this study came from prescription claims records of patients taking one of six chronic medication classes during the period of December 1, 2011 to February 28, 2014. ABMS patients were matched with controls on prior adherence behavior, medication class, age, gender, and geographic region. **RESULTS:** Mean PDC scores ranged from 0.73 to 0.91 for ABMS patients, and from 0.57 to 0.71 for controls depending on the medication class. The percentage of adherent individuals (i.e., PDC≥ 0.8) was 55% to 84% for ABMS participants and 37% to 62% for controls. Odds of adherence was 2.3 to 3.6 times greater with ABMS. Controls became non-persistent (61% to 74%) more often than ABMS patients (33% to 44%) with hazard ratios of non-persistence being 0.39 to 0.67 for individuals in the program. Compared to controls, study patients had a 33% to 61% lower likelihood of non-persistence, depending on the drug class. **CONCLUSIONS:** ABMS program in a community pharmacy setting was associated with significant improvements in adherence and persistence for patients who were existing users of chronic medications for at least six months.

PHS75
EXAMINING THE IMPACT OF A HYBRID CLINICAL PHARMACY PRACTICE MODEL ON MEDICATION ADHERENCE IN PATIENTS WITH METABOLIC SYNDROME
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OBJECTIVES: To examine the difference in the adherence of patients with metabolic syndrome receiving a hybrid model of care compared to other community pharmacy models. **METHODS:** Prospective, randomized-control trial design conducted through an integrated delivery network in Northwest Ohio. Patients required to have Paramount health insurance, type 2 diabetes, hypertension, hyperlipidemia, prescribed at least five oral medications, and prescribed an oral medication for each disease state. Patients randomly assigned to one of four groups. The first group received standard pill bottles. The second group received adherence packaging and refill synchronization. The third group received pill bottles and medication therapy management (MTM) using an appointment-based model. The fourth group received the hybrid model, including adherence packaging, refill synchronization, and MTM using the appointment-based model. Adherence was measured using patient-reported pill count. **RESULTS:** The sample (n=26) was predominantly female, average age 61 years. Types of insurance included Medicaid(7.14%), Medicare(28.57%), and commercial insurance(64.29%). Adherence ranged from 29% to 100% among all participants. Interim, three-month results showed that the greatest improvement in medication adherence over time was seen in the hybrid model group, from 23.6% to 81.6%. **CONCLUSIONS:** These preliminary results show that the hybrid model group has the potential to positively impact medication adherence. This is an ongoing study. Further results are needed to fully analyze the benefit of the hybrid pharmacy practice model of care.

PHS76
THREE METHODS TO ASSESS ADHERENCE TO HIV ANTIRETROVIRAL TREATMENT IN A CHILEAN HEALTHCARE SETTING
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OBJECTIVES: Adherence to antiretroviral therapy (ART) is a main concern in the control of HIV and is associated with treatment success or failure. The aim of this study was to determine adherence to ART using three methods and to identify factors related with non-adherence. **METHODS:** The study included 225 HIV patients under treatment at Regional Hospital in Concepción, Chile. Adherence was measured through two indirect methods: (1) the simplified medication adherence questionnaire (SMAQ), a survey including four questions with dichotomous answers, one question with a categorical answer, and one question with an open answer; and (2) a pharmacy dispensation register (PDR), which measures adherence through a ratio defined as number of days for which the supply of medication dispensed was prescribed divided by days between prescription fills; and through one direct method: (3) measuring viral load and CD4+ cell count. These methods were compared and a global weighted adherence measure was calculated for the 47 patients that received all three evaluations. **RESULTS:** According to the SMAQ, 51% of patients were adherent; while 43% were adherent according to PDR, and 50% were adherent according to the direct method. Weighted adherence was 21%. Main causes of non-adherence were: delay in medication refill (43%); lack of information regarding ART (43%); forgetting doses (36%); and adverse reaction (35%). Patients were more adherent to treatment with the combination of two nucleoside reverse transcriptase inhibitors and one non-nucleoside reverse transcriptase inhibitor (33%) than with the same combination plus protease inhibitor (12%). **CONCLUSIONS:** Adherence to HIV treatment was below the Chilean average. Because the global weighted average was significantly less than the individual adherence percentages, each method alone is not sufficient to obtain a reliable determination of adherence. An evaluation of the impact of non-adherence behavior on the Chilean national HIV program is recommended.

PHS77
PHARMACOTHERAPY OPTIMIZATION PLAN FOR PATIENTS WITH TYPE-2 DIABETES MELLITUS (T2DM) AND HYPERTENSION IN A CHILEAN HEALTHCARE SETTING: IMPACT AND OUTCOMES
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OBJECTIVES: The aims of this study were (1) to determine the change in patients' knowledge about their disease and treatment; (2) to assess the percent change in values of glycated hemoglobin (HbA1c) and change in blood pressure in mmHg; and (3) to evaluate adherence status, measured through pill counts. **METHODS:** A prospective study was conducted using patients with a diagnosis of both T2DM and hypertension at Arauco hospital in Arauco, Chile. Each patient participated in three interviews over a period of six months. The study incorporated a tailored pharmacotherapeutic intervention plan that included written and oral information regarding pathologies and pharmacological treatment. To determine treatment adherence, a pill count method was performed during each interview. Change in patient adherence and knowledge of the diseases and treatments was assessed using the Fisher exact test. The difference in HbA1c and blood pressure between the initial and final sessions was evaluated using Student's t-test. Analyses were performed using SPSS version 17. **RESULTS:** A total of 50 patients were selected, of whom 33 (66%) were female. At the beginning of the program, 30% of patients were found to be adherent. At the end of the study, this number had increased to 46% (p-value: 0.099). 10% of patients had full knowledge of their disease at baseline. At the end of the study, this number had increased to 66% (p-value <0.001). After the completion of the interviews, significant decreases were observed for HbA1c (p-value <0.001), and systolic blood pressure (p-value <0.001). Stratified by sex, stronger and more significant decreases were observed for females in terms of both HbA1c (0.63%, p-value=0.003) and systolic blood pressure (17 mmHg, p-value <0.001). **CONCLUSIONS:** A pharmacotherapeutic optimization plan based on improved patient adherence and knowledge and implemented for patients with chronic conditions, such as T2DM and hypertension, has had a positive impact on therapeutic outcomes.

PHS78
DEVELOPMENT AND VALIDATION OF PATIENT DECISION AID REGARDING ANTIDEPRESSANT MEDICATIONS
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OBJECTIVES: The aim of the study is to develop and validate a decision aids (DA) fro Arabic depressed patients. **METHODS:** A six-page DA booklet published by Agency for Health Care Research and Quality (AHRQ) was adapted and translated to Arabic using Brisling's back translation model. The work of Al-Muhtaseb was followed to produce a natural Arabic text. Validation was carried out by 24 experts (Physicians, Pharmacists, Academic staff and depressed Patients).International Patient Decision Aid Standards (IPDAS) Criteria Checklist was used to examine the DA structure and content. **RESULTS:** Experts strongly agree that the DA will increase patient's recognition, knowledge and understanding of their condition and options, based on (IPDAS). 83% of experts report that DA provide information about options in sufficient detail for decision making, 68% present probabilities of outcomes is an unbiased and understandable way, 85% clarifying and expressing patients values and 87% for structure guidance in deliberation and communication with a total of 81% for the whole content criteria. Secondly, the development process has 63% positive feedback. Particularly, 83% agreed that the information are present in balanced manner, 65% for having a systematic development process, 71% for using a scientific evidence data , 69% for using plain language but less than half of the experts agreed with the disclosing conflicts of interest. Finally, the sum of expected effectiveness criteria got a very high percentage (93%). In addition, experts provided constructive feedback with some modification regarding the language and general layout of the DA. **CONCLUSIONS:** Up to our knowledge we developed and validated the first Arabic DA based on IPDAS criteria for depressed patients. Future research needed to assess the effectiveness of this DA on depressed patient involvement in SDM.

PHS79
IMPACT OF STRUCTURED PATIENT EDUCATION ON QUALITY OF LIFE OF SOUTH INDIAN DIABETICS
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OBJECTIVES: The normal life of patients is seriously affected by Diabetes Mellitus (DM). According to Diabetes Atlas it is estimated that 61.3 million people live with diabetes in India (2011 estimates) and77.2 million pre-diabetics. The objective of this study was to evaluate the impact of clinical pharmacist intervention by counselling on medication adherence and quality of life of diabetic patients. **METHODS:** The study sample was extracted from a reputed diabetic clinic of Warangal, India over a period of six months. About 175 patients diagnosed with diabetes were recruited and were randomized into test (n=85) and control (n=90). Health Related Quality of Life of patients was assessed using 19 domain Audit of Diabetes Dependent Quality of Life (ADDQoL) questionnaires and medication adherence was assessed using Brief Medication Questionnaire (BMQ). BMQ and ADDQoL questionnaires were administered at baseline and subsequent four follow-ups each of one month duration. Test group patients administered with structured patient education by using various counselling aids on monthly basis and controlled group patients were deprived of the same. The data was subjected to relevant statistics. **RESULTS:** The study reveals that there is a highest impact of patient education on working life, physical activity, financial condition and their freedom to eat and drink followed by other quality of life domains in diabetic patients. The mean fasting blood sugar and post prandial blood sugar values of each phase were correlated and was