events (N=9 of 12, 75%). This may contribute to improved health care utilization, as well as the lowering of hospitalization of emergency department visits (N=7= 78%). PMAS also resulted in cost-savings in seven of the studies. **CONCLUSIONS:** Pharmacist-led outpatient anticogulation services attained better quality of anti-coagulation control, lower bleeding and thromboembolic events, and lower health care utilization.

**PHS1**

THE IMPACT OF HOME MEDICATION REVIEW IN PATIENTS WITH TYPE 2 DIABETES MELLITUS LIVING IN RURAL AREAS OF KUANTAN, MALAYSIA

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**OBJECTIVES:** To investigate whether Home Medication Review (HMR) conducted by a pharmacist can improve the clinical indices, quality of life and medication adherence among patients with type 2 Diabetes Mellitus (T2DM) over a period of one year. The study was a prospective, randomized, controlled study. **RESULTS:** 78 patients were recruited and randomized to the intervention group (38) or the control group (35). There was no significant difference identified in baseline parameters. Data was analysed in SPSS19.0(BM) using ANOVA and paired t-test. There were significant improvements in HbA1c and fasting blood sugar (FBS). **CONCLUSIONS:** Home medication review conducted by a pharmacist provided significant improvement in health and QoL of patients with Type 2 Diabetes Mellitus. HMR may be beneficial for patients with chronic diseases and for the health care system.

**PHS2**

INCREASED-DOSE HEPATITIS B VIRUS VACCINE IMPROVE THE IMMUNE RESPONSE IN HIV-INFECTED PATIENTS: A META-ANALYSIS

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**OBJECTIVES:** Hepatitis B co-infection may lead to increased mortality of HIV patients. All HIV-infected patients are recommended to receive hepatitis B virus (HBV) vaccination to prevent the co-infection. However, HIV-infected patients often fail to produce protective antibodies to HBV vaccination. This study is tasked to assess the efficacy of increased-dose HBV vaccine in HIV-infected patients through systematic literature review and meta-analysis of clinical trials were conducted. The search was carried out on PubMed, EMBASE and the Cochran Database of Systematic Reviews, from the beginning of databases to December 2013. Keywords used in the electronic searches included “hepatitis b”, “HBV”, “vaccine”, “vaccination”, “immunization”, “HIV”, and “ADIS”. We only included studies those published in full papers. The inclusion criterion was as follows: English language and randomized controlled trials. The main outcomes to be compared were the response rates of increased-dose HBV vaccine (increase dose or administration times of standard dose) and standard-dose vaccine (2μg 3 times at month 0, 1, and 6) in HIV-infected patients. Random effect model was used in the meta-analysis. **RESULTS:** A total of 20 studies were selected and 1 study was excluded. The result was reported by risk ratio. Statistical analyses were performed using the software program Review Manager 5.2. **RESULTS:** Of 1204 references yielded by electronic searches, five trials, which represent a total of 424 patients, were included in the final analysis. The heterogeneity was moderate (I²=32%) according to the I² test. Pooling of study results showed a significant increase in response rate among increased-dose patients versus control patients; the pooled risk ratio (RR) was 1.17 (95% CI: 1.06-1.30). The number of intent-to-treat is 9. Only one study presented severe adverse reaction reports related to the vaccination, and no increased risk was observed. **CONCLUSIONS:** Increasing the dosage of vaccine may improve the immune responses significantly in HIV-infected patients.

**PHS3**

IMPACTING HEALTH CARE QUALITY, SAFETY, AND COSTS THROUGH THE INTEGRATION OF CLINICAL PHARMACY SERVICES

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**OBJECTIVES:** Medications must be prescribed and administered properly to be effective for the treatment of chronic conditions. Medication errors and poor adherence lead to increased cost and poor outcomes. Evidence shows that clinical pharmacists improve when pharmacists are integrated into the care team. The objectives of this study were to improve health care quality, medication safety, and reduce health care costs for high-risk patients through the integration of clinical pharmacy services. **METHODS:** This case study utilized the clinical pharmacist model, consisting of a pharmacist, resident, and pharmacy technician were integrated into the safety net clinics starting in September 2012. Five additional sites were added in October 2013. These teams target high-risk patients with poor chronic disease control. The services provided include medication and disease state management, medication reconciliation, and medication access. This study has a pre-post design with measures of the impact of the addition of the pharmacist to care. **RESULTS:** The data collected includes measures of health outcomes, medication-related problems, and pharmacist interventions. **CONCLUSIONS:** 3,001 unique patients were seen by the pharmacy teams during the initial 13 months. A majority of these patients used both the primary and pharmacy care that was provided. For patients with baseline A1C>9%, 30% achieved A1C<8% in the intervention group versus 13% in the control group after 180 days. For patients with initial BP >140/90, 87% of patients in the intervention group achieved BP <140/90 within 45 days. 16,668 medication-related problems were documented for 1,993 patients. Problems were categorized into four groups including appropriateness/efficacy(43%), medication safety(18%), medication nonadherence/missuse(27%), and miscellaneous(9%). 1,125(14.4%) adverse drug events (ADEs) were identified and resolved for patients seen by the clinical pharmacy teams. The most common aADs were excessive dosing, adverse drug reactions, and polypharmacy. **CONCLUSIONS:** The integration of clinical pharmacists at safety net patient-centered medical home improves health outcomes and medication safety.

**PHS4**

EPIDEMIOLOGY OF PSYCHIATRIC HOSPITALIZATIONS PUBLIC HEALTH SYSTEM IN BRAZIL BETWEEN 2010 AND 2012

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**OBJECTIVES:** This study aims to analyze the profile of psychiatric hospitalizations within the public health service in Brazil between 2010 and 2012, analyzing the main causes of hospitalization, according to the International Classification of Diseases (ICD-10), and comparing the profile of residence on Brazil. **METHODS:** A descriptive study on the profile of psychiatric hospitalizations within the public system of Brazil present in the database of the Hospital Information System (HIS) of the Ministry of Health from January 2010 to December 2012. **RESULTS:** Data analysis showed that there was no significant change in the number of cases between 2010 and 2012; the total number has remained at an average of 280,150 admissions per year. The most frequent causes of hospitalization were: mental and behavioral disorders (65%), 40% white, brown and 6% black, and 28% of hospitalized patients do not report skin color. The most admissions occurred between the ages of 30 and 49 years (50%). Regarding the causes of hospitalization, classified according to ICD-10 (F00- F99), the pattern found was 35% of the causes of hospitalization for schizophrenia, 20% are disorders related to alcohol use, 18% are related disorders psychotropic and 18% are mood disorders. Other causes, such as dementia, and others appear less than 5% of cases each. Regarding the profile of admissions by place of residence, it was observed that the more developed regions of the country had the highest percentage of hospitalizations, Southeast (42%) and South (28%). **CONCLUSIONS:** This study show that use of secondary data in surveys, from information system health, can be a low-cost generated, an important source of epidemiological information, especially in countries with universal coverage of public health services such as Brazil, in which the majority of the population depends on the public health system.

**PHS5**

PNEUMOCOCCAL VACCINE TARGETING STRATEGY FOR THE OLDER ADULTS: CUSTOMIZED RISK PROFILING

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**OBJECTIVES:** Current pneumococcal vaccine campaigns take a broad, primarily age-based approach to immunization, often relying on health administrative data. **METHODS:** The design of a customized model for patient immunization targeting. METHODS: Data was extracted for 1,053,435 members of an Israeli HMO, age 50 and older, during the study period 2008-2010. We developed and validated a logistic regression model to predict hospital-treated pneumonia using training and test sets. **RESULTS:** The total highest risk within the study validation population were targeted to detect 54% of those members who were subsequently treated for hospitalized pneumonia. The high-risk population identified by this model included 46% of the follow-up cases, and 27% of community-treated pneumonia cases. These outcomes were compared with international guidelines for risk for pneumococcal diseases that accurately identified only 35% of hospitalized pneumonia, 4% of IHD cases and 21% of community-treated pneumonia. **CONCLUSIONS:** We demonstrate that a customized model for vaccine targeting performs better than international guidelines, and therefore, risk modeling may allow for more precise vaccine targeting and resource allocation than current national and international guidelines. Health care managers and policy-makers may consider the strategic potential of utilizing clinical and administrative data for creating population-specific risk prediction models to inform vaccination campaigns.

**PHS6**

UNDERSTANDING THE CHOICE OF FAMILY PLANNING METHODS AMONG WOMEN AGED 15–49 YEARS IN UGANDA: EVIDENCE FROM THE UGANDA DEMOGRAPHIC AND HEALTH SURVEY 2011

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**OBJECTIVES** In the Uganda Demographic and Health Survey (UDHS) 2011, we assessed factors that influence women’s choice of family planning methods. **METHODS** A cross-sectional household survey with a sample of 14,484 women aged 15–49 years was undertaken in 2011. **RESULTS** In the multivariate logistic regression model, women aged 30–34 years were 1.26 times more likely to use modern contraceptives than those aged 15–19 years. Women in rural areas were 1.51 times more likely to use a modern contraceptive than their urban counterparts. The most commonly used contraceptive methods were ever-use of injectables and condoms. Multivariate logistic regression analysis showed that the presence of a husband in the household was a protective factor against using the traditional method of the withdrawal. **CONCLUSIONS** The use of contraceptive methods was influenced by age, residence and type of contraceptive methods. The results highlight the need to adapt methods to suit the changing preferences of the population.