female. Eighty-seven percent of elderly population used health service at least once and frequent users in multi-health centers. One-third of elderly patients that used the health services were hypertension patients. Older age (incidence rate: RR 2.77, 95% confidence interval 2.75-2.79 for patients aged > 80 years), being female (RR 1.96, 95% CI 1.95-1.98), and having multiple-comorbidities (RR 1.56, 95% CI 1.49-1.63) were identified as the main contributors to the utilization of health service.

**CONCLUSIONS**: Health need was the most important factor associated with health services utilization. Health system should be appropriately designed for elderly population. Further study should be performed to evaluate economic consequences of the elderly’s health utilization and identify the factors affecting patients who visit multi-health-centers.

**PHS105 BREAST AND CERVICAL CANCER SCREENING IN UK: DYNAMIC INTERRELATED PROCESSES?**

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**OBJECTIVES**: No previous analysis has investigated simultaneously the determinants of screening uptake for the breast and cervical cancer screening in UK and looked at possible spillover effects from one type of screening examination to the other type of screening examination. **METHODS**: 838 women with 11,732 from the British Household Panel Survey (BHPS) for the time period from 1992 to 2008 were analysed for this analysis. As econometric model was a dynamic random effects panel bivariate probit model with initial conditions (Wooldridge-type estimator) used and dependent were the uptake of breast and cervical cancer screening in the recent year. **RESULTS**: Our investigation shows the high relevance of past screening on the importance of spillover from one type of screening examination to other type of cancer screening even after controlling for covariates and unobserved heterogeneity. The uptake for breast and cervical cancer screening was higher if the same screening examinations were one or three years before which is in accordance with the medical screening guidelines. For breast and cervical cancer screening positive spillover effects existed from one type of examination to the other examination for the following. Women with a positive history of a GPs, living in a partnership and individuals in the recommended age groups had a higher uptake for breast and cervical cancer screening. Other socioeconomic and health related variables had non-uniform results in both screening examinations. **CONCLUSIONS**: Promoting the uptake level of one type of female prevention activity could also enhance the uptake of the other type of prevention activity.

**PHS106 EXPLORING THE IMPACT OF CLINICAL, FUNCTIONAL AND SOCIAL FACTORS ON HIP FRACTURE PATIENT HOSPITALIZATION COSTS: INFORMING THE DESIGN OF A NEW CASE MIX PAYMENT SYSTEM**

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**OBJECTIVE**: Case mix reimbursement systems used in many countries to pay for hospitals typically rely on combinations of diagnoses and procedures to group patients according to their expected costs. In frail, complex populations health system should be appropriately designed for elderly population. Further study should be performed to evaluate economic consequences of the elderly’s health utilization and identify the factors affecting patients who visit multi-health-centers.

**RESULTS**: The analysis cohort included 11,321 patients for hospital services typically rely on combinations of diagnoses and procedures to group patients according to their expected costs. In frail, complex populations and have non-uniform results in both screening examinations. **CONCLUSIONS**: Promoting the uptake level of one type of female prevention activity could also enhance the uptake of the other type of prevention activity.

**PHS107 INCREASED IN ACUTE HEALTH CARE USE AMONG PEOPLE LIVING WITH HUMAN IMMUNODEFICIENCY VIRUS (HIV) AND CO-MORBID DISEASES IN CANADA**

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**OBJECTIVES**: Depression is a common co-morbidity among people living with HIV. Co-morbid depression often leads to poor self-management and non- adherence to antiretroviral therapy which may result in increased use of emergency and inpatient care. We aimed to examine impacts of co-morbid depression on acute health-care use utilization over time among this high-need population in Ontario. **METHODS**: A longitudinal cohort study of 3,545 patients (N=3,545) aged 16-65 years who were part of the Canadian HIV Household Treatment Network (OHTN) Cohort Study and the administrative health database. Co-morbid depression defined based on either the Center for Epidemiologic Studies Depression Scale (≥20) or the Kessler Psychological Distress Scale (≥30) and hospitalization costs. Results: the efficiency and inpatient care utilization were assessed during the 12 months following each interview. Urgent and non-urgent emergency room visits were defined using the five-level Emergency and Inpatient Case Severity Scale (EICSS). Generalized mixed effect regressions were used to examine associations between the acute care utilization and the co-morbidity depression over time. **RESULTS**: At baseline, 950(27%) were identified with co-morbid depression. The HIV+ patients with co-morbid depression were more likely to be age<50 years (OR=1.95, 95% CI: 1.9-1.9), female (OR=1.69, 95% CI: 1.3-1.9), have CD4 count <200 cells/mm³ (OR=1.93, 95% CI: 1.1-1.7) and have used non-medical drugs in past 6 months (OR=1.89, 95% CI:1.5-2.1). The presence and the use of urgent and non-urgent emergency room and inpatient care for those with co-morbid depression were 58% vs 42%, 44% vs 31%, 13% vs 7% compared to their non-depressed counterparts. Over the five-year follow-up, those with co-morbid depression were more likely to use urgent (Adjusted OR quintile-specific pooled analysis showed statistically significant decreased odds in improvement in follow-up mental health outcomes between women who did and did not use the BAS services. **METHODS**: The Australian Longitudinal Study of Women’s Health data provided baseline and follow-up measures linked to Australia’s Medical Benefits Scheme data, which provided claims visits for women to counselling services under the BAS. Regression models were adjusted for a propensity score estimate on the use of the BAS services based on baseline characteristics. These propensity scores were then used in stratified analyses to investigate the effect of follow-up between those who did and did not use the BAS services. **RESULTS**: Women using the BAS services had a lower mean mental health baseline scores compared to those not using the BAS (52.4 vs 62.2, respectively). Women using the BAS services had a lower mean mental health baseline scores compared to those not using the BAS (52.4 vs 62.2, respectively). Women using the BAS services had a lower mean mental health baseline scores compared to those not using the BAS (52.4 vs 62.2, respectively). Women using the BAS services had a lower mean mental health baseline scores compared to those not using the BAS (52.4 vs 62.2, respectively).

**OBJECTIVE**: To understand characteristics of sickle cell disease (SCD) patients ≥16 years old who have increased utilization of inpatient (IP) and emergency department (ED) resources. **METHODS**: Medical records of 254 SCD patients ≥16 years old were retrospectively reviewed with medical records. High utilizers (HUs) were defined as patients within 25% of IP+ED care for SCD-related complications per patient per year. Patients were classified in cohorts based on cumulative blood transfusion and iron chelation therapy (ICT): <15 units, no ICT (CI), >15 units, no ICT (C2), ≥15 units and ICT (C3). SCD complications per patient per year (SCCPPY) were calculated for each cohort. Results: in the analysis cohort there was a significant association between SCD complications per patient per year (SCCPPY), cohort comparisons used rate ratios (RR). A logistic regression was used to identify risk factors for high IP+ED utilization. Sensitivity analysis: patients with ≥10 SCD complications per patient per year (SCCPPY=20) or the K 2010-2012 cohort study of Ontarians(N=3,545) who resided in the province of Ontario. **RESULTS**: The implementation of the BAS has resulted in women with poorer mental health receiving the government services and improved mental health outcomes scores for those patients that completed treatment. With increasing mental health problems and iron chelation therapy (ICT): C1; ≥15 units and ICT (C3). SCD complications per patient per year (SCCPPY) were calculated for each cohort. Results: in the analysis cohort there was a significant association between SCD complications per patient per year (SCCPPY), cohort comparisons used rate ratios (RR). A logistic regression was used to identify risk factors for high IP+ED utilization. Sensitivity analysis: patients with ≥10 SCD complications per patient per year (SCCPPY=20) or the K 2010-2012