

insurance, and those who were discharged to home health were more likely to be readmitted. A significant downward trend over time was observed in 30-day readmission rates in the fully adjusted model (OR=.96; CI=.94 –.97). **CONCLUSIONS:** We found a significant reduction in 30-day readmission rates over time between the years 2008 and 2016. This reduction is substantial as it reduces both physical and economic burden of readmissions on our patients and healthcare system and remains a significant quality measure closely linked to incentives and penalties for care providers by the private and public payers.

## PCV121

## THE EFFECT OF PATIENT EDUCATION PROGRAM ON HYPERTENSION-RELATED KNOWLEDGE AMONG USERS OF COMPLEMENTARY AND ALTERNATIVE MEDICINES

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**OBJECTIVES:** To assess hypertension-related knowledge among patients pursuing complementary and alternative medicines (CAM) as a way of self-care; and find the differences in patient's knowledge following educational intervention. **METHODS:** The study was conducted between May to December 2015 among hypertensive patients attending two major teaching hospitals in Baghdad, Iraq. A cross-sectional design was adopted; and a convenience sampling technique was used for patients' recruitment. Data collection based on the use of standard validated questionnaire for patient assessment on enrollment and follow-up clinical visit thereafter. Patients were engaged in two separate CAM education sessions and a four-page booklet was used for the purpose of education. **RESULTS:** Inadequate knowledge towards hypertension (mean=6.94±3.2) was prevalent among the respondents. A significant difference in hypertension-related knowledge was seen among CAM users and non-users (P=0.007). Where, CAM users were less (mean=6.69±3.3) in their level of hypertension-related knowledge than CAM non-users (mean=7.6±3.4). This was affected by demographic characteristics like gender (P=0.004), education (P<0.001), monthly income (P=0.002), and marital status (P=0.003). However, a significant improvement in patients' knowledge was detected following the enrollment in the education program (P<0.001). **CONCLUSIONS:** Hypertension-related knowledge was inadequate among Iraqi hypertensive patients pursuing CAM as a way of self-care. This poor knowledge among CAM users was affected by diverse patient's characteristics like gender, education, monthly income, and marital status. A significant improvement in hypertension-related knowledge was seen following the educative information. The education program was effective and provide reliable information for the purpose of patient's education in the context of CAM.

## PCV122

## DELAYING TREATMENT WITH CHOLESTEROL-LOWERING MEDICATIONS IN PATIENTS MEETING NEW TREATMENT GUIDELINES: A RETROSPECTIVE COHORT ANALYSIS

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**OBJECTIVES:** The 2013 American College of Cardiology/American Heart Association (ACC/AHA) guidelines may expand eligibility for cholesterol-lowering therapy to a large number of new users. The objective of this paper is to document the potential for this expansion in to improve clinical outcomes and reduce cost. **METHODS:** Patients meeting 2013 guideline classification criteria were identified using Humana data [2007-2013] and divided into three groups: elevated LDL [identified in earlier guidelines], selected diabetes patients and patients with atherosclerotic cardiovascular diseases [ASCVD]. Patients with no pre-classification cholesterol treatment were then selected and divided in two treatment groups: early [before any CVD event] and late/never treated. The clinical outcomes were the time to four separate events [AMI, stroke, coronary stenting, coronary artery bypass graft surgery (CABG)]. Costs were measured over the first year following a risk classification. Clinical outcomes were analyzed using Cox proportional hazards models. Costs were analyzed using generalized linear models [GLM] and the RAND two-step model for hospital costs. **RESULTS:** 237,856 people were classified according to ACC/AHA guideline criteria and met study inclusion/exclusion criteria. Only 3.5% of study patients fell into the elevated LDL risk group identified under previous guidelines and 65% of these patients were treated 'early.' Early treatment rates were lower for ASCVD patients [37%] and diabetes patients [46%]. Early treatment significantly reduced event risks [H.R 0.26 to 0.34, p<0.0001] across the 4 events and reduced cost over the first year -\$3,607 [p<0.001]. Early treatment was most effective in the 'new' ASCVD risk group which was the largest, at highest risk, and most expensive to treat of the 3 ACC/AHA risk group. **CONCLUSIONS:** The 2013 treatment guidelines for cholesterol-lowering therapy will significantly increase the number of patients eligible for treatment. However, all eligible patients must receive 'Early' treatment to experience reduced CVD event risk and lower health care.

## INDIVIDUAL'S HEALTH – Clinical Outcomes Studies

## PIH1

## ASSOCIATION OF SEDATIVE HYPNOTICS AND FALL RISK IN COMMUNITY-DWELLING OLDER ADULTS WITH CHRONIC CONDITIONS: A SYSTEMATIC LITERATURE REVIEW

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**OBJECTIVES:** Degree of fall risk attributed to sedative hypnotics in older adults is unclear when complicated by chronic conditions with underlying fall

risk. Accordingly, the objective of this review was to assess the risk of falling, fall-related fractures, and fall-related hospital admissions in community-dwelling older adults with chronic conditions who are prescribed sedative hypnotics. **METHODS:** PubMed, PsychInfo, CINAHL, and ClinicalTrials.gov were searched using keywords such as "sedative hypnotic," "fall-risk," and "older adult." Criteria for article inclusion were: 1) English-language; 2) peer-reviewed; 3) published between 1980-2016; 4) experimental or quasi-experimental study designs; 5) adults > 65 years of age; 6) adults with a chronic condition that increases baseline risk of falling (diabetes, heart disease, atrial fibrillation, hypertension, osteoporosis, depression, cancer); 7) adults with a fall from the same level in the community setting; and 8) adults prescribed 1 or more benzodiazepine(s) or z-hypnotic(s) indicated for insomnia (triazolam, temazepam, flurazepam, zolpidem, (es)zopiclone, zaleplon). Exclusions were verified by a second independent investigator. Quality assessment utilized the Mixed Methods Appraisal Tool (MMAT). **RESULTS:** After full-text review, 5 articles were retained. Studies used cross-sectional or single-group longitudinal designs, with MMAT quality scores of 50%-75% and sample sizes ranging from 124-1,062. Only one study assessed fracture risk and no studies assessed healthcare utilization. The risk of falls was inconsistent across studies and population subgroups. For example, benzodiazepines increased the odds of falling by 18 times (OR: 18.22, 95% CI 2.71-122.38) in older adults with atrial fibrillation. However, sedative hypnotics did not statistically significantly increase odds of falling in older adults with stroke (OR: 2.3, 95% CI 0.76-6.76). **CONCLUSIONS:** Increased risk of falling attributable to use of sedative hypnotics in older adults may vary based on underlying chronic conditions. Further studies should investigate contributors to fall risk in older adults with specific types of chronic conditions.

## PIH2

## ASSESSMENT OF THE SAFETY AND EFFICACY OF LONG-TERM ACTING REVERSIBLE CONTRACEPTIVE METHODS (LARC) COMPARED TO CONVENTIONAL METHODS (NON-LARC) IN ADOLESCENTS: AN META-ANALYSIS

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**OBJECTIVES:** The aim of this study was to analyze the efficacy and safety of long-acting reversible contraceptive methods (LARC) compared to conventional contraceptive methods in adolescents. **METHODS:** We performed, a systematic search in Medline, Embase, Lilacs and the Cochrane Database from inception to May 2016, for observational studies and randomised controlled trials comparing the use of LARC versus non-LARC in adolescents. Two reviewers independently selected studies, assessed quality, and extracted data. Discrepancies were resolved through consensus. The outcomes were adherence, pregnancy rate, adverse events, abortion rates, and adolescent's contraception choice. We used the RevMan 5.0 to combine results across studies. We derived risk ratios (RRs) and mean differences with 95% CIs using a random-effects meta-analytic model. **RESULTS:** Nine relevant studies were included. LARC's 12 months adherence is better than non-LARC (RR 1.38 [95% CI 1.01 – 1.87]); analyzing only more recent studies, those since 1999, an even better 12 months adherence (RR 1.53 [95% CI 1.05 – 2.23]) was observed. There was no difference between LARC and non-LARC concerning the pregnancy rate (RR 0.46 [95% CI 0.09 – 2.52]). Also, there was no difference between the methods in relation to adverse events (RR 0.78 [95% CI 0.59 – 1.03]), abortion rates (RR 1.88 [95% CI 0.07 – 47.60]). Adolescent's contraception choice favored non-LARC (RR 0.63 [95% CI 0.33 – 1.19]). **CONCLUSIONS:** LARC presents better adherence with no difference in relation to the pregnancy and abortion rates. Also, there is no difference concerning adverse events between LARC and non-LARC. Notwithstanding, non-LARC is still preferred by the adolescents, although without statistical significance. We conclude that LARC has potential benefits on preventing unplanned pregnancy among adolescents. However, it is noteworthy that most of the included studies are from the 1970's and the absence of more recent studies comparing new available technologies may impact our results.

## PIH3

## POTENTIAL DRUG-DRUG INTERACTIONS IN PEDIATRIC WARDS OF GONDAR UNIVERSITY HOSPITAL, ETHIOPIA: A CROSS SECTIONAL STUDY

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**OBJECTIVES:** To determine the prevalence, level of severity of potential drug-drug interactions (PDDIs) and the associated factors for PDDIs in hospitalized pediatric patients of Gondar University Hospital. **METHODS:** A retrospective cross-sectional study was conducted for a period of 3 months from March to May 2014 in pediatric wards of Gondar University Hospital. Systematic random sampling technique was used to select charts from all pediatric patients' charts with every 7th interval to get sample size of 384. Univariate and multivariate analysis were performed to compute crude odds ratio and adjusted odds ratio respectively. Statistical significance was set at P value < 0.05. **RESULTS:** A total of 176 (45.8%) patients had at least one PDDI. A total of 393 PDDIs, which were comprised of 283 types of interacting combinations, were identified. Of the total of 393 PDDIs, most were of moderate severity [201 (51%)] followed by minor [152 (39%)] and major severity [40 (10%)]. The most common interacting pairs of major severity were gentamicin + furosemide (6), cotrimoxazole + methotrexate (4) and phenytoin + artemether (4). The occurrence of PDDIs was significantly associated with age and polypharmacy. **CONCLUSIONS:** The study showed that most of the interactions had moderate severity followed by minor severity. Age and polypharmacy were found to show statistically significant association with the occurrence of PDDIs. Due to sensitive nature of pediatrics population, close monitoring is recommended for the detection and management of PDDIs to prevent its negative consequences.