increasingly used CTS as a benchmark to guide price agreements. Only those with a price which correspond to an incremental cost effectiveness ratios (ICER) below the acceptability threshold (i.e., cost below the maximum price for pharmaceuticals) are included in the national health system. Although the mechanism (which we call “ICER pricing”) is well defined, there is a lack of theoretical economic models exploring the allocation of consumer and producer surplus and social welfare generation under it. In this paper we propose a general supply and demand based model on economic theory, which bargaining solutions and demand functions based on functioning of pharmaceutical pricing. We propose a baseline model based on existing approaches in the literature and we explore the implications of relaxing some key assumptions on the optimal CET and the distribution of the consumer and producer surplus.

**Results:** show that when the payer has effective bargaining power, the CET can be set at a level above the supply-side threshold without involving a net health loss for the system. The same implication draws from the case of increasing healthcare budget for the system. The latter, both policies are considered in the additional revenue from the extra funding, while in the former, the benefit comes from transferring some of the surplus of the developer to the payer via a price effect. The incorporation of R&D cost contributes to move the CET upwards in order to create incentives to developers to invest in pharmaceutical innovation for the future. Finally, if ICERs of the industry concentrate around a range of threshold values, then the optimal threshold, or alternatively the threshold that equates the surpluses of the payer and the developer might increase depending on the shape skensness of the distribution.

**PNS100**

**FINANCING OF THE UNIVERSALIZATION OF HEALTH IN PERU: ANALYSIS WITH THE 2016-2020 NATIONAL SURVEY**

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**Objectives:** Estimate the financing of the health universalization in Peru: analysis with the National Household Survey (ENAHO) 2016-2020

**Methods:** Cross-sectional study based on the ENAHO 2016-2020 (http://iinei.inei.gob.pe/microrad/at). A partial economic evaluation of disease cost type (EC) was performed. The study population was a projected population of the INEI. The costs were estimated from the perspective of the financial Ministry of Economy and Finance (MEF), public expenditure was obtained from the Integrated System of Financial Administration-MEF (http://apps5.mineco.gob.pe/transparentcia/Navegador/default.aspx) and for the insured population, without insurance and utilization of ENAHO health services for the years 2016-2020. Exchange rate that was considered in the study S/ 3.4 = USD 1

**Results:** The per capita expenditure was USD 322.9 (2019), USD 308.2 (2018), USD 277 (2017) and USD 257 (2016). By 2020, the population without insurance is added (8,088,044). Per capita is estimated at USD 210 (2020). Likewise, the use of health services by insured persons was 25% (2019), 24% (2018), 23% (2017) and 25% (2016). Insured people should not spend any money. However, in these last 5 years they have spent on average for a medical consultation at USD 9.1, in Medicines USD 10.3, for clinical analysis USD 20.2, in X-rays and tomography USD 44.2, and in hospitalization USD 15.5. Increasing the budget for universal health care coverage is a very relevant aspect, however, this must be complemented by improvements in access to health services for the most vulnerable population, this will improve financing policies and guarantee the protection of the right to health.

**PNS101**

**COLLABORATIVE APPROACHES TO ATTAIN HEALTHCARE SUSTAINABILITY IN LATIN AMERICA**

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**Objectives:** Identify hurdles to achieving healthcare sustainability in Latin America (LA), review approaches taken by policy makers to control healthcare budgets and pharmaceutical spending and propose actionable solutions to attain sustainability that mutually benefit healthcare systems and industry. **Methods:** Global benchmarks for healthcare sustainability, LA-specific hurdles challenging achievement of these targets and solutions to achieve sustainability successfully implemented in other regions were identified after reviewing 46 articles published in leading international organizations (e.g., UN, WHO / PAHO, WBG, IDB, OECD, IFPMA, PHRMA, IFARMA, etc.). Identified global solutions were prioritized based on the feasibility to implement, economic impact and time to impact. **Results:** Despite significant improvement to achieve universal health coverage (UHC), LA’s four largest markets based on 2019 GDP - Argentina, Brazil, Colombia, and Mexico - remain below PAHO, WHO, and OECD benchmarks for healthcare sustainability. The pressure to expand coverage given UHC goals, aging population, and increasing prevalence of non-communicable diseases, and with an unfounded misreased disease agenda, combined with constrained budgets and inadequate use of resources have left LA healthcare systems unable to provide services required to meet population needs. The current approach to healthcare sustainability focuses on cost-containment measures to control healthcare spending, rather than addressing health inequalities holistically. Instead, policy makers and the pharmaceutical industry should collaborate to implement mutually beneficial short-term (tax exemption for pharmaceutical products, International Non-Proprietary Name prescribing, and control over remuneration and wholesaler margins), mid-term (managed entry agreements, value-based procurement, and sin-taxes on tobacco, sugar, alcohol, etc.) and long-term (value-based healthcare, social / health impact bonds) solutions to ensure long-lasting sustainability in LA. **Conclusions:** Across LA the demand for health services has outpaced supply. Policy makers have responded by implementing measures that control pharmaceutical spending. Instead, relevant stakeholders should explore alternative approaches that address healthcare inefficiencies holistically.

**No Specific Disease - Health Service Delivery & Process of Care**

**PNS102**

**PREDICTORS OF PREVENTABLE RE-HOSPITALIZATION AMONG ADULTS IN THE UNITED STATES: A RETROSPECTIVE STUDY USING NATIONAL READMISSION DATABASE**

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**Objectives:** Hospital readmissions are one of the significant indicators of poor quality in healthcare. This study aimed to determine the predictors of 30-day preventable hospital readmission in the US. **Methods:** A retrospective study was conducted using 2016 Healthcare Cost and Utilization Projects - National Readmission Database. The study included patients aged ≥ 18 years with at least one index event for hospitalization. Patients, who died, had missing length of stay (LOS) or had <30 days of follow-up, were excluded. Preventable readmissions were defined by the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators using ICD-10-CM codes. Multivariable logistic regression was used to examine the predictors of preventable 30-day readmissions after controlling for patient demographics and comorbidities. **Results:** Among 13.9 million patients that were included with at least one index event in 2016, 1.36 million (9.75%) had preventable 30-day hospital readmissions. Hospitalized patients were predominantly ≥65 years (56.13%) and were covered by Medicare (66.06%), Hypertension (39.15%), diabetes (31.86%) and COPD (14.65%) were the frequently reported patient comorbidities. Multivariable analyses revealed that males (Odds Ratio (OR): 1.30), patients in higher age group (40-64 years: OR: 3.24; ≥ 65 years: OR: 3.80) and with Medicare (OR: 0.94) were significantly associated with 30-day preventable readmissions. The strongest predictors of preventable 30-day readmissions were clinical comorbidities such as congestive heart failure (OR: 138.00), hypertension (OR: 16.63), chronic obstructive pulmonary disease (OR: 58.03), fluid and electrolyte disorder (OR: 23.39), obesity (OR: 14.69), psychoses (OR: 6.15; 6.09-6.29), depression (OR: 6.60), other neurological disorders (OR: 4.95), rheumatoid arthritis (OR: 4.87), paralysis (OR: 4.46; 4.30-4.63) and solid tumors (OR: 5.85). **Conclusions:** The study identified several demographic and clinical factors associated with 30-day hospital readmissions, which could potentially help health care systems to target interventions to reduce preventable hospital readmission.

**PNS103**

**DIRECT PRIMARY CARE: COMPARISON OF QUALITY METRICS TO AHRQ, CDC, AND HEALTHY PEOPLE 2020 INDICATORS**

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**Objectives:** Direct Primary Care (DPC) is an evolving patient-centered, prevention-oriented, fixed-fee-for-membership ambulatory care model designed to facilitate direct patient-provider communication and contact. The study objective was to identify primary care quality (PCQ) metrics from electronic health records (EHR) and claims data for comparison to measures from similar populations benchmarked by the Agency for Healthcare Research and Quality's National Healthcare Quality and Disparities Reports (AHRQ-NHQDR), the Centers for Disease Control and Prevention's Behavioral Risk Factor Surveillance System (CDC-BRFSS), and the Office of Disease Prevention and Health Promotion's Healthy People 2020. **Methods:** For a DPC practice (R-Health, New Jersey), EHR and claims data for enrolled patients from October 2016-November 2019 were retrospectively studied. Data were stratified into three primary care categories: all patients, patients enrolled for 1 year or more (those who did and did not receive care from R-Health) and engaged patients (enrolled at least 1 year AND received care from R-Health). PCQ metrics were chosen based on initially on National Quality Forum's validated measures and then mapped to benchmarks for comparisons. PCQ metrics (e.g., breast/cervical/colorectal cancer screenings, cholesterol recordings, emergency department visits) were collected using CPT/ICD-9/ICD-10 codes from claims and EHR data. **Results:** In the study timeframe, R-Health enrolled 7,040 DPC patients: female (4,341,61.66%), and adults (6,610,87.6%) and minors (880,12.5%) were excluded due to small sample size. Analysis of adult nine PCQ metrics showed R-Health exceeded 55.5% of state and national
benchmarks. Secondary analysis across all metrics indicated engaged patients had higher use of preventive services than patients in the nil and enrolled for 1 year or more by their practice. This aligns with the desired aims of the Health DPC model. Conclusions: This study provides contemporary, real-world evidence on how DPC may serve as a viable model to support prevention goals set by each AHRQ, CDC, and Healthy People 2020 benchmarks.

PNS104
A QUALITATIVE ASSESSMENT OF HEALTH STATUS OF THE ARAB DESCENT COMMUNITY IN SOUTH FLORIDA
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Objectives. The purpose of this study is to expand our knowledge of the risk factors that affect the health status of Arab descent Americans (ADAs) in South Florida. This study explores the impact of perceived discrimination and health literacy among ADAs and their effect on healthcare services utilization (HSU) and medication adherence. Background. Research on health outcomes of ADAs is sparse. Considering the current sociopolitical climate in the US, it is important to take steps to better understand the stigma associated with this marginalized group and how such discrimination and stereotypes impact their general health and health outcomes such as HSU and medication adherence. Method. A convenience sample of 27 eligible participants was recruited using a snowball sampling approach. Recruitment only took place in face-to-face settings. Study participants were divided into two focus groups led by a moderator. Each focus group followed the same procedures and protocol guidelines. Verbatim transcripts of the audio-taped focus group sessions were transcribed in English and a qualitative data management software—NVivo 12—was used for the analysis.
Results: Participants’ mean age was 35 years, 70% were female, 37% US-born, and 48% have been in the US for 20 years or more. Eight themes were identified as being strongly associated with HSU and medication adherence: gender role; generation differences; health literacy; self-perceived discrimination; access and insurance; mental health stigma; and reactive health need. Conclusion. Participants highlighted the influence of religion, health literacy and perceived discrimination on their HSU and medication adherence. This study was funded by the NSU Health Professions Division grant.

PNS105
ASSOCIATION OF LOW-INCOME SUBSIDY/DUAL ELIGIBILITY AND DISABILITY WITH HIGH-RISK MEDICATION USE AMONG PART D MEDICARE BENEFICIARIES
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Objectives: Limited evidence exists of the association of low-income subsidy/dual-eligible disability and disability with high-risk medication (HRM) use among Medicare Part D beneficiaries with different drug plans. Using the Pharmacy Quality Alliance HRM measure, this study examined the relationship between: 1) LIS/DE and HRM use; and 2) disability and HRM use in Medicare Advantage Prescription Drug Plan (MA-PD) and stand-alone Prescription Drug Plan (PDP) beneficiaries. Methods: This retrospective cross-sectional study used a 5% national sample of 2013 Medicare administrative claims data to create two groups of beneficiaries aged >65 years who were continuously enrolled in a MA-PD or PDP. Beneficiaries with >2 prescriptions for the same HRM during 2013 were identified. Multivariable generalized linear mixed models were used to assess the association of: 1) LIS/DE and HRM use; and 2) disability and HRM use after adjusting for health plan effect and patient-level characteristics in MA-PD and PDPs.
Results: A total of 520,019 MA-PD and 881,264 PDP beneficiaries met the study criteria. Of these, 88,093 MA-PD and 213,096 PDP beneficiaries were LIS/DE, while 48,957 MA-PD and 83,593 PDP were disabled. LIS/DE beneficiaries had a higher proportion of HRM users compared to non-LIS/DE beneficiaries (MA-PD 13.3% versus 9.7%, p<0.001; PDP 17.1% versus 13.2%, p<0.001). Disabled beneficiaries had a higher proportion of HRM users compared to non-disabled beneficiaries (MA-PD 17.0% versus 9.6%, p<0.001; PDP 22.9% versus 13.2%, p<0.001). In multivariable analyses, LIS/DE and disability were associated with HRM use among both MA-PD (LIS/DE odds ratio [OR]=1.07; 95% confidence interval [CI]=1.04-1.10; disability OR=1.38; 95% CI=1.34-1.42) and PDP beneficiaries (LIS/DE OR=1.14; 95% CI=1.12-1.16; disability OR=1.37; 95% CI=1.34-1.40). Conclusions: LIS/DE and disability were associated with higher HRM use in both MA-PD and PDP beneficiaries even when controlling for health plans, underscoring the importance of considering these factors when assessing health plan performance on HRM measures.

PNS106
MEDICAL HOME IMPLEMENTATION AND HEALTHCARE UTILIZATION: A LONGITUDINAL ANALYSIS IN ITALY
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Objectives: Seventeen medical homes (MH) were established in the Local Health Authority (LHA) of Parma, Emilia-Romagna, Italy, between 2011 and 2016. This cohort study estimates changes in healthcare utilization associated with MH implementation identified through an administrative healthcare database for the period 01/2011-12/2017 who lived in Parma ≥1 year, were ≥14 years of age, and had a documented general practitioner (GP) in Parma LHA. Exposure to MH care was time-varying. Rates of healthcare utilization were computed using Cox proportional hazards or logistic regression. Additional analyses explored potential heterogeneity in the exposure-outcome relationships for 1) MH implemented early (2011-2012) versus late (after 2012), 2) the first year versus later years after MH implementation, and 3) MH having low versus medium-high adherence of their on-site services. In the 14 years of the study followed, 431,378 residents; 22% of their total person-time was under exposure to MH. Changes in admissions and ambulatory care-sensitive conditions admissions were not generally associated with MH implementation. MH implementation was associated with a 7% decrease in emergency department (ED) utilization (HR=0.93; 95% CI=0.92-0.94). Modestly greater decreases in certain utilization measures were observed among patients receiving care from GPs in a MH implemented after 2012, a MH that had been open longer than 1 year, or a MH having medium-high adherence. In this setting, using a multifaceted intervention to eliminate automated daily CXRs through didactic sections. Then, formal discussions about CXR need for each patient based post-hoc analysis of one-way ANOVA, clinical pharmacists had a better attitude towards medication discontinuation compared to physicians (p=0.025). Conclusions: Multiple factors could influence prescribers to consider medication discontinuation. However, de-prescribing practice could vary among different health care providers, and with their education level and experience. Hence, therapy specific de-prescribing guides and algorithms, inter-professional communication and continuous education should be in place for evidence based de-prescribing and to guide health professionals in the decision process.

PNS107
DE-PRESCRIBING AND REDUCTION OF INAPPROPRIATE POLYPHARMACY IN RESOURCE LIMITED SETTINGS: PERCEPTIONS IN ETHIOPIA
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Objectives: Polyparmacy has been linked with adverse drug events, morbidity, mortality and increased healthcare costs. This could necessitate de-prescribing practice to lessen inappropriate polypharmacy. This study aimed at evaluating prescribers’ perceptions and experiences in relation to de-prescribing. Methods: A convenience sample of 27 eligible care providers (physicians, nurses and clinical pharmacists) at the University of Gondar Referral Hospital, Ethiopia. The outcome measure (attitudes of prescribers towards intentional medication discontinuation) was evaluated using a validated tool “Prescribers’ Perceptions of Medication Discontinuation: Survey Instrument Development and Validation”. The tool had five parameters/domains that could influence participant’s decision to consider medication discontinuation or de-prescribing. One-way ANOVA was employed to test significant association between socio-demographic characteristics of the participants and medication discontinuation. Results: A total of 85 participants were enrolled in the study but 82 were included in the final analysis with a response rate of 96.5%. To make a decision on medication discontinuation, most participants (87%) turned out less likely or not to be influenced by having a strong relationship with their patients. However, participants perceived factors like significant physical health conditions, objective response to the intended effect of the medication (eg, BP), formal education and on-the-job experience highly influenced them to make a decision on medication discontinuation. Based post-hoc analysis of one-way ANOVA, clinical pharmacists had a better attitude towards medication discontinuation compared to physicians (p=0.025).
Conclusions: Multiple factors could influence prescribers to consider medication discontinuation. However, de-prescribing practice could vary among different health care providers, and with their education level and experience. Hence, therapy specific de-prescribing guidelines and algorithms, inter-professional communication and continuous education should be in place for evidence based de-prescribing and to guide health professionals in the decision process.