health. Many barriers prevent their routine implementation across healthcare systems, including the availability and quality of data to link payments to outcomes. We aimed to create a novel real world data (RWD) environment with linked datasets for breast cancer patients in Wales from 2005 to 2020 to test an experimental, retrospective OBA. **Methods:** We linked datasets covering patients with in Wales from 2005 to 2020. We used the Welsh Breast Cancer Audit dataset linked across CaNISC, ChemoCare, PEDW, APC, OPA, EDDS, and ONS death datasets. Data were de-identified, pseudonymised, linked, and analysed within the Secure e-Research Platform (SeRP). Inclusion criteria and 10 outcomes of interest were determined through multidisciplinary expert workshops. Missingness analyses were conducted on inclusion and outcome variables. All data integration and cleaning were performed in SQL. **Results:** We created a first of its kind linked, integrated data environment in Wales within SeRP. Key parameters from an experimental OBA created a unique population in the data and demonstrated feasibility. The unique population is comprised of 696 patients with incident non-operable, locally advanced or metastatic breast cancer from 2014 to 2020; 99% female with median age of 72 years at inclusion. We defined and standardised five outcomes: 1-year survival, 30-day mortality, tolerance of treatment, spinal cord compression, and days disrupted by care. Five of the 10 outcomes (e.g. progression free survival) were not included due to lack of dataset access, free-text format, and high missingness. **Conclusions:** RWD will be vital to enable implementation and monitoring of OBAs. Integration with additional datasets, more consistent data capture to enable inclusion of outcomes most relevant to stakeholders, a cost-effective method to extract data from free-text fields, and reduced missingness are future developments needed.

CO145
SENSITIVITY TO CHANGE OF THE PDQ-EXERCISE

Morley D,[1] Dummett S,[1] **Knupfer M,**[2] Churchman D,[3] Kelly L,[1] Jenkinson C[1]
[1]University of Oxford, Oxford, UK, [2]Oxford University Innovation, Oxford, UK, [3]Oxford University Innovation, Oxford, OXF, UK

Objectives: Exercise is recognised as an important tool in the management of Parkinson's disease. The PDQ-Exercise is a newly developed seven-item patient reported outcome measure (PROM) that has been developed to assess the efficacy of studies that focus on or incorporate an exercise component. Validation surveys indicate that the measure demonstrates excellent validity, internal consistency and test-retest reliability. A further important attribute of any PROM is sensitivity to change; the capacity to detect meaningful changes in health status over time. The objective of this study was to make an assessment of the sensitivity to change of the PDQ-Exercise and identify the minimally important difference (MID) and effect size for the measure. **Methods:** People with Parkinson's (PwP) were recruited through Parkinson's UK. Participants completed the PDQ-Exercise online on two occasions, six months apart. On second administration participants answered an additional four questions asking how much, or otherwise, their health had changed over the period of time in question. Subsequent analyses focused on those PwP indicating small changes in their health status. **Results:** At first administration 398 PwP fully completed the PDQ-Exercise and at second administration 268 participants who responded with no missing data were included. The percentage of those who reported their QoL health as 'a little better' was 23.5% (n=63), whilst 10.8% (n=29) reported their health as 'a little worse'. No meaningful analysis could be conducted for the former as mean values were virtually identical. For the latter the mean score at first administration was 38.55 and at second administration was 44.10. The MID was calculated as 5.55, with an effect size of 0.25. **Conclusions:** Results indicate that the PDQ-Exercise demonstrates sensitivity to deterioration in the health of PwP. This, in conjunction with previously reported psychometric characteristics, indicates that the measure can confidently be incorporated in evaluative studies and clinical trials.

CO146
POTENTIAL PREDICTORS AFFECTING ACCESS TO BREAST CANCER SCREENING AMONG WOMEN IN THE UNITED STATES USING THE HEALTH BEHAVIORAL MODEL: A MEPS PANEL ANALYSIS

Fatima B, Yazdanfard S, Essien EJ
College of Pharmacy, University of Houston, Houston, TX, USA

Objectives: Despite the national campaign and multiple efforts to reduce the mortality associated with Breast Cancer (BC), mammography screening participation rates remain below the goal set by American Cancer Society (ACS) for the early detection of cancer. The access of mammography screening (MS) and clinical breast examination (CBE) could be improved if potential factors that impact nonattendance were better understood. Therefore, the objective of this study is to evaluate the predictors of breast cancer screening (BCS) behaviors within the frame work of Health belief model. **Methods:** This retrospective cross-sectional study evaluated the BCS rates in women (aged≥ 18 years) utilizing 2011 to 2015 MEPS data. This study design addressed constructs of Health belief model (HBM) and applied logistic regression model to estimate predictor variables associated with BC screening. The outcome variable BCS was defined as those who received MS and CBE (both). **Results:** Out of approximately 50,000 women, CBE was found to be the most common screening with an uptake of 95.04% (N =46,897) followed by mammography 74.04% (N = 37,080). It was determined that every age group proved to provide significant results related to screening. A significant higher proportion of Non-

Hispanic black (aOR:1.461, 1.161-1.837) were more likely to receive BC screening compared with any other race. Women who are uninsured (aOR:0.485, 0.360-0.652) were 52% less likely to obtain screening compared to women with private insurance. BC screening uptake is also associated with perceived susceptibility & severity i.e. osteoarthritis (aOR:1.392 ,1.039-1.863) and previous BC diagnosis (aOR:3.093, 1.66-5.76). Perceived barriers such as women who drive (aOR: 3.47, 1.47-8.20) were 2 to 2.47 times more likely to obtain BC screening compared to women who depended on other means of transportation. **Conclusions:** Policymakers can use the results of this study to develop guidelines to improve health equity, and establish methods to improve the way screening is performed.

CO147
COMPARATIVE EFFICACY AND SAFETY OF PHARMACOLOGICAL INTERVENTIONS FOR MANAGING SICKLE CELL DISEASE COMPLICATIONS IN CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW WITH NETWORK META-ANALYSES

Tonin F,[1] Ginete AC,[2] Ferreira J,[2] Delgadinho M,[2] Fernandez-Llimos F,[3] Brito M[2]
[1]Health & Technology Research Center, Escola Superior de Tecnologia da Saúde (H&TRC-ESTeSL), Instituto Politécnico de Lisboa, Lisbon, PR, Portugal, [2]Health & Technology Research Center, Escola Superior de Tecnologia da Saúde (H&TRC-ESTeSL), Instituto Politécnico de Lisboa, Lisbon, Portugal, [3]Laboratory of Pharmacology, Department of Drug Sciences, Faculty of Pharmacy, University of Porto, Porto, Portugal

Objectives: Sickle cell disease (SCD), an inherited hemoglobinopathy that causes anemia, severe pain, vaso-occlusive crisis (VOC), is currently recognized as a global public health concern, being the leading cause of pediatric stroke. Our aim was to synthesize the evidence on the efficacy and safety of interventions for managing SCD in this population. **Methods:** A systematic review with searches in PubMed, Scopus, and Web of Science was performed (April-2022). Randomized controlled trials comparing disease modifying agents in SCD patients under 18 years old were included. For each outcome of interest, data were pooled by means of Bayesian network meta-analyses with surface under the cumulative ranking curve analyses (SUCRA). Results were reported as odds ratio (OR) with 95% credibility intervals (CrI). **Results:** Seventeen trials (1982-2022) mostly from African countries (65%) and North America (53%), assessing the effect of different interventions' regimens (hydroxyurea [n=6 trials], L-arginine [n=3], antiplatelets [n=2], immunotherapy/monoclonal antibodies [n=2], sulphates [n=2], docosahexaenoic acid [n=1], niprisan [n=1]) and placebo were included. No statistical differences among treatments were found for the main outcomes. SUCRA revealed that immunotherapy/monoclonal antibodies and hydroxyurea 20 mg/kg are potentially more effective against acute chest syndrome (83% and 76% probabilities, respectively), VOC (71% and 80%, respectively) and needing of transfusions (72% and 75%, respectively), while L-arginine (100-200 mg/kg) and placebo were more prone to these events. Although therapies were overall considered safe, antiplatelet and sulphates may lead to more discontinuations and severe adverse events (uncertainty evidence). Results were similar between age subgroups (<10 years vs. 10-19 years). **Conclusions:** The available evidence on the effect of drugs for managing SCD in children and adolescents is insufficient and weak. No clear definition for some outcomes exists. Hydroxyurea may remain the standard of care for this population, however, long-term well-designed and well-reported trials comparing new immunotherapy/monoclonal antibodies should be performed.

CO148
TIME IN REMISSION AS AN ALTERNATIVE OUTCOME MEASURE FOR ANKYLOSING SPONDYLITIS: A 4-YEAR PROSPECTIVE STUDY OF 1900 USERS OF ANTI-TNF

Tužil J,[1] Mlcoch T,[1] Závada J,[2] Svoboda M,[3] Pavelka K,[2] Doležal T[1]
[1]Institute of Health Economics and Technology Assessment (iHETA), Prague, Czech Republic, [2]Institute of Rheumatology, Prague, Czech Republic, [3]Institute of Biostatistics and Analyses, Ltd. Spinoff company of the Faculty of Medicine of the Masaryk University, Brno, Czech Republic

Objectives: We have recently validated time in remission (TIR; https://www.mede-vio.cz/tir-calculator/) as novel outcome measure for rheumatoid arthritis patients. This study aimed to introduce TIR in ankylosing spondylitis (AS). **Methods:** The ATTRA-AS registry cohort of AS patients treated with anti-TNF between 2012 and 2016 has been described previously. Point remission and sustained remission were defined as ASDAS<1.3 in one or both of two consecutive visits, respectively. TIR (0-100%) was interpolated between each two ASDAS values measured at two consecutive visits. Following patients over time, Spearman correlation coefficients were calculated between CRP, BASFI, BASDAI, HAQ, SF-36 bodily pain, EQ-5D utility and WPAI work impairment (WI). Additionally, we used TIR, point remission and sustained remission to predict EQ-5D utility and WI in a training sample via mixed effect clustered linear regression. Adjusted R^2 and mean squared error (MSE) of the prediction were calculated in the test set (split 70/30). **Results:** TIR was significantly correlated (p<0.001) with CRP (coefficient -0.528), BASFI (-0.566), BASDAI (-0.653), HAQ (-0.511), SF-36 bodily pain (0.563), EQ-5D utility (0.485) and WI (-0.565). During the follow-up, TIR predicted EQ-5D utility in the test set (R^2=0.17; MSE=0.056) better than sustained remission (R^2=0.13; MSE=0.057) and somewhat