Conclusions: Medical decision support services, such as guardianship care, are increasing in importance as shared decision making between patients and physicians evolves to address polypharmacy and deprescribing for older adults.

Multiple Diseases - Real World Data & Information Systems

PMU121
APPLICATION OF REAL-WORLD DATA FROM MEDICAL BIG-DATA PLATFORM IN REAL WORLD EVIDENCE GENERATION: A PRACTICE IN POST-MARKETING RESEARCH IN CHINA

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Objectives: Real-world data (RWD) has been increasingly contributed to improved health outcomes. With the developing of EMR systems and medical big-data platforms, RWD can be well accessed currently through proper compliance procedures in China. Some digital platforms are developed to help the application of RWD, such as DPAP, a traceable and regulated Data Process & Application Platform for application of RWD in clinical research. This study was to investigate the project types using RWD derived from the DPAP for real world evidence (RWE) generation in post-marketing research. **Methods:** Projects applying RWD have been categorized into RWI (real-world insight), RWS (real-world study), and HEOR. RWI refers to descriptions of status quo of certain diseases and treatments. RWS refers to studies with clear research questions, and patient inclusion and exclusion criteria. HEOR stands for health economics and outcome research. Other types of projects include predictive modelling and advanced database analysis. **Results:** Among all the on-going and accomplished projects, 56% RWI, 35% RWS, 9% HEOR, and 1% other types. Especially, 80% of projects involved the analyses of treatment pattern or treatment flow, 70% of projects included patient journey analyses, and 30% projects compared and assessed the therapeutic effectiveness by different interventions. Studies were also designed to support drug developments and launches, unmet clinical needs evaluation, market analyses and access strategy, HTA preparation, and reimbursement negotiations. The disease areas involved in the projects were broad, from chronic diseases to severe malignant tumor, as well as from lung infections to surgical anesthesia. **Conclusions:** The RWD derived from medical big-data platform have been widely and innovatively used for RWE generation in post-marketing research, provide more pragmatic research in real-world clinical practice, which has been well recognized by the pharmaceutical industry, reflecting the need for demonstrating the product value in real world settings.

PMU122
MEDICATION SYNCHRONIZATION IS ASSOCIATED WITH GREATER ADHERENCE AND LOWER HEALTHCARE EXPENDITURES

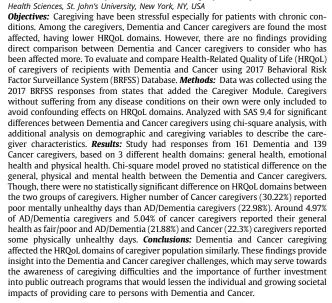**Feng L,** Mu Y, Taitel M
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Objectives: Medication synchronization is a promising intervention to improve medication adherence and health outcomes, especially for patients with multiple chronic conditions and complex medication regimens. This study evaluated its impact on the adherence for three therapeutic classes - diabetes, hypertension and hyperlipidemia, as well as the annual expenditures for subjects covered by commercial health plans. **Methods:** This retrospective, propensity matched (by age and gender) study used 2015-2017 IBM MarketScan® Databases to identify individuals with four chronic medications filled between January-June 2015 with at least one fill in three therapeutic classes. The test (synchronized) group filled on the same date, and the propensity score matched control (non-synchronized) group filled on more than one date within the same period. Adherence rates (proportion of days covered ≥ 0.80 as defined by CMS) in three therapeutic classes and outpatient medical and pharmacy cost for all reasons across three years were computed in test and control groups. **Results:** Test and control group each contains 37,623 patients with average age of 54.3 and 58.5% of male after matching. In 2015, average adherence rates were modestly higher (p<0.0001) in the test group than that of the control group: 83.4% vs. 82.2% for diabetes, 85.8% vs. 84.4% for hypertension, and 83.4% vs. 80.3% for hyperlipidemia. The higher adherence seen in the test group continued into 2016. Outpatient medical cost decreased substantially (p<0.0001) in 2015 ($4,330 vs. $5,783), 2016 ($5,317 vs. $6,491) and 2017 ($5,624 vs. $6,862). Annual pharmacy cost dropped in the test group as well. **Conclusions:** Chronic medication self-synchronization in commercial populations are associated with the greater medication adherences for three major therapeutic classes, and lower trends in healthcare expenditures. This study used real-world evidence to reveal a possible intervention strategy towards the economic outcome of patients with multiple medications for their chronic conditions.

PMU123
EVALUATING AND COMPARING HEALTH-RELATED QUALITY OF LIFE (HRQOL) OF CAREGIVERS OF RECIPIENTS WITH DEMENTIA AND CANCER USING 2017 BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS) DATABASE

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Objectives: Caregiving have been stressful especially for patients with chronic conditions. Among the caregivers, Dementia and Cancer caregivers are found the most affected, having lower HRQoL domains. However, there are no findings providing direct comparison between Dementia and Cancer caregivers to consider who has been affected more. To evaluate and compare Health-Related Quality of Life (HRQoL) of caregivers of recipients with Dementia and Cancer using 2017 Behavioral Risk Factor Surveillance System (BRFSS) Database. **Methods:** Data was collected using the 2017 BRFSS responses from states that added the Caregiver Module. Caregivers without suffering from any disease conditions on their own were only included to avoid confounding effects on HRQoL domains. Analyzed with SAS 9.4 for significant differences between Dementia and Cancer caregivers using chi-square analysis, with additional analysis on demographic and caregiving variables to describe the caregiver characteristics. **Results:** Study had responses from 161 Dementia and 139 Cancer caregivers, based on 3 different health domains: general health, emotional health and physical health. Chi-square model proved no statistical difference on the general, physical and mental health between the Dementia and Cancer caregivers. Though, there were no statistically significant difference on HRQoL domains between the two groups of caregivers. Higher number of Cancer caregivers (30.22%) reported poor mentally unhealthy days than AD/Dementia caregivers (22.98%). Around 4.97% of AD/Dementia caregivers and 5.04% of cancer caregivers reported their general health as fair/poor and AD/Dementia (21.88%) and Cancer (22.3%) caregivers reported some physically unhealthy days. **Conclusions:** Dementia and Cancer caregiving affected the HRQoL domains of caregiver population similarly. These findings provide insight into the Dementia and Cancer caregiver challenges, which may serve towards the awareness of caregiving difficulties and the importance of further investment into public outreach programs that would lessen the individual and growing societal impacts of providing care to persons with Dementia and Cancer.

PMU124
PATIENTS KNOWLEDGE ON MICROBIOTA AND ACCEPTABILITY OF FECAL MICROBIOTA TRANSPLANTATION IN VARIOUS CHRONIC DISEASES

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Objectives: Gut microbiota is now considered as a key player in human health. Despite increasing media exposure, patients' knowledge on microbiota has never been assessed. We used a validated online health community tool, that proved to be representative of the general patient community, to evaluate in various chronic diseases, patient knowledge on microbiota and fecal microbiota transplantation (FMT) acceptability. **Methods:** All patients that connected to the Carenity online French community from 10/08/2018 to 01/25/2019 were invited by e-mail to fulfill a questionnaire on the voluntary basis. Were assessed: main disease and its duration, demographic data, therapeutics, diets habits. Knowledge on microbiota, on probiotic and FMT and FMT acceptability were evaluated through specific questions. **Results:** Eight hundred and seventy-seven patients fulfilled the online questionnaire with 101 patients with Crohn's disease (11.5%), 55 with ulcerative colitis (6.3%), 127 with rheumatoid arthritis (14.5%), 222 with ankylosing spondylitis (25.3%), 52 with lupus (5.9%), 64 with psoriasis (7.3%), 61 with obesity (n=61, 7%), 195 with type 2 diabetes (22.2%). Characteristics of participating patients were similar to those of the whole cohort in terms of age and geographic location. Overall, 47.1% (n=413/877) of patients declared knowing what "microbiota" means, with appropriate answers to test questions. There was no significant difference among diseases. Only 10.7% of patients with knowledge on microbiota received information from their medical doctor (44/413). If proposed by a healthcare professional, 37.2% of all patients (326/877) declared to be interested or highly interested to perform FMT. Factors associated with FMT acceptability were male sex (OR: 1.63, CI95% (1.14 to 2.32), p≤0.01), previous knowledge on FMT (OR: 4.16, CI95% (2.92 to 5.96), p≤0.001), and previous