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Additionally, 17 studies involving persistence (out of N=23 total) reported LAI users were less likely to discontinue or had significantly longer time to discontinue compared to OAPS. Only 1 study found no difference in persistence between LAIs and OAPS. Conclusion: This review highlighted the advantage of LAIs over OAPS in improving adherence and persistence in heterogeneous patient populations. Given that LAIs are underutilized and frequently reserved as the “last resort” for patients with more severe schizophrenia, LAIs should be considered earlier as an option for patients with schizophrenia.

EPH169
THE EFFECT OF DRUG EXPOSURE ON PARKINSONISM INCIDENCE IN PEDIATRICS
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Objectives: Antipsychotics and antidepressants were well-known medications associated with an increased risk of secondary parkinsonism. Although the prescriptions of these medications are continuously increased in pediatric populations, there are no studies to investigate the prevalence of Parkinsonism and antipsychotics/antidepressants use in this population. Methods: We conducted a case-crossover study to investigate the association between psychotropic medication use and Parkinsonism in Korean pediatrics under 19 years old using the Health Insurance Review and Assessment Service – Pediatric Patients Sample (HIRA-PPS), 10% random sample of total pediatrics who visited the medical institution each year. In merged data of 7 years from 2010 to 2017, new parkinsonism cases included patients who had the first diagnosis record of Parkinsonism (G20 and G21 International Codes of Disease 10th Revision codes) from July to December in each year without the diagnosis record of any movement disorders (KD-10, G20–G26) before case incidence. Hazard period was defined as 1-30 days prior to the Parkinsonism event. We matched four control periods of 151-180 days, 121-150 days, 91-120 days, and 61-90 days prior to the incidence of the case. Conditional logistic regression was performed to estimate adjusted odds ratios (AOR) and 95% confidence intervals (CIs). Results: We identified 680 cases of Parkinsonism from 2010 to 2017; the number of cases increased from 12 cases in 2010 to 143 cases in 2017. More than half of the patients (453, 66.2%) were male, and most patients were 13-19 years old. The AOR of Parkinsonism risk during the 30 days before the incidence of the event was 14.97 (95% CI 9.42–23.81) for antipsychotics and 5.31 (95% CI 3.39–8.31) for antidepressants, respectively. Conclusion: The increase of parkinsonism observed and the use of antipsychotics and antidepressants was significantly associated with increased risk of Parkinsonism in pediatrics.

EPH171
ASSOCIATION OF MULTIMORBIDITY WITH USE OF HEALTH INFORMATION TECHNOLOGY
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Objective: To examine the association of multimorbidity with Health Information Technology (HIT) use among adults in the US. Methods: We used cross-sectional study design and data from the Health Information Technology Trends Survey (HINTS5) Cycle 4. HIT use was measured with ten variables comprising access, recent use, and healthcare management. Unadjusted and adjusted logistic and multinomial logistic regressions were used to model the associations of multimorbidity with HIT use. Results: Among adults with multimorbidity, HIT use for specific purposes ranged from 37.8% for helping make medical decisions to 51.7% for communicating with healthcare providers. In multivariable regressions, individuals with multimorbidity were more likely to report general use of HIT (AOR = 1.48, 95% CI = 1.01-2.16) and more likely to use HIT to check test results (AOR = 1.83, 95% CI = 1.31-2.55) compared to adults with no multimorbidity. We also observed interactive associations of multimorbidity and age on various components of HIT use. Compared to younger adults with multimorbidity, older adults (> 65 years of age) with multimorbidity were less likely to use almost all aspects of HIT. Conclusions: HIT use disparities by age and multimorbidity were observed. Education and interventions are needed to promote HIT use among older adults in general and specifically among older adults with multimorbidity.

EPH172
WHEN IS IT VALUABLE FOR COVID-19 BOOSTER DOSE?: A TRANSMISSION DYNAMICS MODEL-BASED EFFECTIVENESS AND COST-EFFECTIVENESS ANALYSIS OF TWO BOOSTER DOSE VACCINATION PRIORITY STRATEGIES IN MAINLAND CHINA
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Background: The world is dealing with both the declining vaccine effectiveness and increasing demand for booster doses to address SARS-CoV-2 virus mutations. This study explore various vaccination strategies to model reduce illness and determine those approaches that are cost-effective. Methods: We established a transmission-dynamics model to predict the spread of SARS-CoV-2 infection within 6 month period under three strategies: discontinuing vaccination; prioritizing second shot; and prioritizing booster dose. Outcomes of interest included infected cases, deaths, quality adjusted life days (QALDs). We considered the impact of social factors in the scenario analysis, and also included uncertain assumptions and parameters in the sensitivity analysis. Findings: The number of avoided cases/severe cases with prioritizing second shot and prioritizing booster dose was 462/88 and 585/61 compared with discontinuing vaccination (2357/289) within 180 days. Prioritizing booster vaccination could potentially save 89% 71 QALDs and US$12,564. Conclusion: The scenario analysis indicated that prioritizing second shot may become more effective and beneficial with increased mask-wearing rate and nucleic acid tests requirement. Interpretation: When both rates of quarantine and mask-wearing were relatively high, prioritizing booster vaccination would be more effective. However, prioritizing second shot could avoid more cases of critically-ill and could override the latter under stricter epidemic control, indicating that booster vaccination has great limitations in improving the protective effect against SARS-CoV-2 mutation. This study provides evidence for effectiveness and cost-effectiveness regarding whether and how to provide vaccine shots and also confirms that strict epidemic controls remain valuable in countries with insufficient vaccine supply.

Keywords: COVID-19 vaccines, vaccination priority, dynamic transmission model.