ABSTRACT of publication (DOI: 10.1002/pds.3928)
Purpose The purpose of this study is to quantify the impact of the different outcomes and definitions of suicidality on the association between antiepileptic drugs (AEDs) and suicidality.
Methods Retrospective cohort studies of selected AEDs (carbamazepine, gabapentin, lamotrigine, phenytoin, pregabalin, topiramate and valproate) using data from UK Clinical Practice Research Datalink (CPRD) alone and linked to UK Hospital Episode Statistics (HES) and UK Office of National Statistics (ONS), and from Danish national registries (DNR). Follow-up started at initiation of one of the study AEDs, divided into exposure periods, a maximum 90-day post-exposure period, and the reference period starting the day after the 90-day postexposure period ended. Primary outcomes were completed suicide (SUI)/suicide attempt (SA) for CPRD and SUI/deliberate self-harm (DSH) for DNR. We applied adjusted Cox regression analyses and sensitivity analyses with varying outcome definitions.
Results We analyzed 84 524 AED users from CPRD-HES-ONS (1188 SUI/SA; 96 SUI) and 258 180 users from DNR (7561 SUI/DSH; 781 SUI). The adjusted hazard ratios (HRs) on SUI/SA ranged between 1.3 (95% confidence interval (CI): 0.84–2.00) for lamotrigine and 2.7 (1.24–5.81) for phenytoin in CPRD-HES-ONS, and between 0.9 (0.78–1.00) for valproate and 1.8 (1.10–3.07) for phenytoin on SUI/DSH in DNR. HRs for the primary outcomes varied consistently across exposure periods and data sources. HRs for SUI were in general lower, more stable and similar for periods of exposure and the 90-day post-exposure period.
Conclusion Applying different outcomes and definitions of suicidality had an impact on the relative risks of suicidality associated with the investigated AEDs with results for SUI being most consistent and reliable.