

Attach a narrative summary of your findings in an Abstract form. This summary should be no more than 500 words. Please include the following sections:

1. Objective

To assess the completeness of reporting of harms, discrepancies in reported safety data and timeliness of access to such data across three main sources of trial data, namely publications, clinical trial registries and clinical study reports.

2. Methods Used (please note whether your methods used were consistent with your original proposal, or whether you revised your methods during your analysis). If your analyses were not completed, please provide an explanation (i.e. PI could not allocate resources to this project or analyses were started but data did not contain needed variables). This information is helpful for the YODA Project to assess barriers to project completion.

The following methods are different from our original proposal. We had initially planned to undertake a systematic review and meta-analysis of the SGLT2 inhibitor medications, including requested CSRs from both the EMA and from YODA. However, mainly due to the impact of Covid-19 on the feasibility of this doctoral project, it was recently decided not to proceed with a full systematic review. We do hope to complete an alternative study comprising of a cross-sectional analysis of requested CSRs to assess the quality of the reporting of safety outcomes across relevant trials for the SGLT2 inhibitors.

Design

Methodological Review / Cross Sectional study

Setting / Data Sources

Clinical Study Reports of the main trials involved in the regulatory approval of SGLT2 inhibitors have been requested directly from the EMA, from Yale Open Data Access (YODA) and have been obtained directly from the EMA's public Clinical Data platform. Matched publications for each trial have been obtained using PubMed, and matched clinical trial registry entries on ClinicalTrials.gov have also been identified.

Data Extraction / Main Outcome Measures

We will assess the completeness and timelessness of reporting of harm data across the three sources using the following measures:

Completeness of reporting across sources

Completeness and consistency of reporting of specific safety outcomes across the three sources

Timeliness of reporting of safety outcomes

Analysis / Statistical Analysis

Descriptive statistics will be reported for the relevant trials. Completeness of reporting of the pre-specified outcomes will be reported for each of the three sources, including proportions of trials with discrepancies between sources. Where relevant, narrative descriptions of the discrepancies in reporting between each source will be included. Delays in the availability of safety results for all three sources will be reported as median time (in days) from study completion to the availability of results, and the relevant interquartile range.

3. Results (please use tables where applicable) (please provide preliminary findings even if full analyses were not completed)

CSRs have been obtained for 36 trials related to 3 SGLT2 inhibitor medications. Initial analysis has found CSRs to be the most complete source of safety data. For one trial involving Canagliflozin, safety data for all

(13/13) safety outcomes were found in the CSR, with 4/13 (30%) of the outcomes reported in the trial registry and 8/13 (61%) found in the publication.

For one study, reporting of UTIs appear to be inconsistent across sources, with episodes of severe UTIs only being reported in the CSR of one study, with the total number of UTIs being reported in the publication and the registry entries.

No safety results for lower limb amputations are reported in the results tables in one CSR involving Canagliflozin, however reports of multiple amputations are reported as narrative descriptions within the CSR document. These events may have been reported as 'knee operations' which raises concerns about mislabeling of important outcomes. There are no mention of amputations in the publication or registry entries for this study.

4. **Conclusions** (please note N/A if your analyses were not completed)
N/A