**Quantitative Data Mining (QDM) Triage Algorithm**

QDM triage algorithm to identify drug-AE signals has two parts.

The first part is the application of QDM methods namely reporting odds ratio (ROR), Bayesian Confidence Propagation Neural Network (BCPNN), Gamma Poisson Shrinker (GPS) and Sequential Probability Ratio Test (SPRT). These methods are applied on the cumulative data and frequency for each drug-AE pair is calculated according to the formula (Table 1). The drug-AE pair is considered a potential signal if the frequency crosses the threshold.

The second part of the algorithm applies the triage strategy for each QDM method. It compares each drug-AE pair received in the most recent week with the previous week. A drug-AE pair is considered significant if its frequency has increased by at least 25% from previous week. Another criterion for considering an existing drug-AE pair as significant is if its signal has changed from “No” in the previous week to “Yes” in the current week. The algorithm also extracts any drug-AE pair which is not present in the database as a new-pair.

The algorithm then filters for seriousness of the significant drug-AE pairs identified by all 4 methods. Only pairs predefined as serious for the most recent week as well as new drug-AE pairs are extracted into Excel in separate sheets labelled “QDM Signaled Pairs” and “New Pairs in Database” for further evaluation.