

Methods Used in Standardizing Drug Names: Experience from OBRI Study

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Objective: Standardization of medication data eliminates collection errors and provides a hierarchical organization to facilitate safety and efficacy comparisons between individual drugs, classes of drugs, and broader groupings. The objective was to code medication data from the Ontario Best Practices Research Initiative (OBRI) cohort using currently available systems.

Methods: The OBRI collects long-term treatment information from a broad range of rheumatoid arthritis (RA) patients. We used the Anatomical Therapeutic Chemical (ATC) code of drug products from the Health Canada Drug Product Database (HC-DPD) which has complete information for all active and discontinued products available in Canada. An appropriate ATC code was selected for each drug based on trade, generic, chemical names, dosage form, and indication. For drugs with multiple ATC codes, the most appropriate code was selected that accurately represented the medication, its route of administration, and the pathology it is intended to treat. For drugs with unmatched codes, broad new categories were introduced into the dictionary while preserving the structure of the ATC system. The ingredients within each unmatched drug product were identified then assigned a new ATC code. For those drugs which were 'unable to code', we used the WHO Criteria to develop a new coding system classify them meaningfully within the ATC classification system structure.

Results: There were 2081 RA patients in the OBRI cohort with 8845 unique medication entries. Using HDPD only, 2415(27.3%) entries were unable to code. These mainly included food products, probiotics, fatty acids, and oils.

Conclusion: Existing HC-DPD is capable of coding the majority of therapeutic agent's observational studies but still a portion of entries cannot be coded using this system alone. In this study creating new codes using WHO classification allowed an appropriate coding that can be used by other groups. This standardized medication data facilitates drug utilization studies.