

No action is without its side effects: adverse drug reactions and missed doses of anti-tuberculosis therapy, a scoping review

Eleanor Dixon¹, Shaista Rasool¹, Brian Otaalo², Ashmika Motee¹, James Dear³, Derek Sloan⁴, and Helen Stagg¹

¹The University of Edinburgh Usher Institute of Population Health Sciences and Informatics

²Makerere University Infectious Diseases Institute

³Edinburgh University

⁴University of St Andrews

May 5, 2023

Abstract

Introduction: A key reason for the failure of anti-tuberculosis (TB) treatment is missed doses (instances where medication is not taken). Adverse drug reactions (ADRs) are one cause of missed doses, but the global evidence for this, their relative contribution to missed doses versus other causes, the patterns of missed doses due to ADRs, and the specific ADRs associated with missed doses have not been appraised. We sought to address these questions through a scoping review. **Methods:** MEDLINE, Embase and Web of Science were searched on 3 November 2021 using terms around active TB, missed doses and treatment challenges. Studies reporting both ADR and missed dose data were examined. (PROSPERO: CRD42022295209). **Results:** Searches identified 108 eligible studies. 88/108 (81%) studies associated ADRs with an increase in missed doses. 33/61 (54%) studies documenting the reasons for missed doses gave ADRs as a primary reason. No studies examined patterns of missed doses due to ADRs. 41/108 (38%) studies examined associations between 68 types of ADR (across 15 organ systems) and missed doses. Nuance around ADR-missed doses relations regarding drug susceptibility testing profile and missed dose originator was found. **Conclusions:** There is extensive evidence that ADRs are a key driver for missed doses of anti-TB treatment. Some papers examined specific ADRs, none evaluated the patterns of missed doses due to ADRs, demonstrating a knowledge deficit. Knowing why doses both are and are not missed due to ADRs is essential in providing targeted interventions to improve treatment outcomes.

Hosted file

Relationship between non-adherence and ADR from anti-TB therapy 2023-04-20.docx available at <https://authorea.com/users/614924/articles/641567-no-action-is-without-its-side-effects-adverse-drug-reactions-and-missed-doses-of-anti-tuberculosis-therapy-a-scoping-review>