The assessment of potential drug-drug interactions in South African children and adolescents receiving antidepressants

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Results
A total of 11,743 prescriptions were dispensed during the study period. The average number of prescriptions per patient per year was 3.3 ± 3.2, median 2. Potential significant level 1 and 2 DDIs were observed in 284 (2.4%) of these. Overall, the highest prevalence of potential interactions occurred in patients taking imipramine (32%, 91 cases), amitriptyline (17.3%, 49 cases) and fluoxetine (16.9%, 48 cases). The drug pairs prescribed most were imipramine with methylphenidate [accounting for 43 (15.1%) of DDIs] and valproic acid [accounting for 32 (11.3%) of DDIs], respectively. The number of DDI cases increased with age. The highest number of cases were adolescents aged 10-16 years (58.1%, n = 284). The highest prevalence of antidepressant drug pairing occurred with amitriptyline and sertraline, accounting for 10.2% (29 cases) of the potential interactions.

Conclusion
At least 2.5% of the child and adolescent population in the South African private healthcare sector were exposed to ≥1 potential DDI of clinical importance in 2010. Methylphenidate was indicated as the cause in the majority of these cases. The potential reasons and ramifications of these prescribing patterns should be evaluated to protect patient's safety.