

<http://hdl.handle.net/1765/125894>



Summary

SUMMARY

This thesis comprises of studies where we used different information sources to answer questions related to the use of medication in children and adolescents.

Exposure to medication may already start at an early stage in the life cycle: the pregnancy period. Observational studies are often conducted to assess the risk of adverse perinatal outcomes, as pregnant women are not included in clinical trials due to obvious ethical reasons. In these studies, different information sources can be used to determine medication exposure during pregnancy. Within the Generation R Study (chapter 2.1), we compared the self-reported medication use and the dispensed pharmacy records for different therapeutic classes of medication. In this chapter, we showed that selective serotonin reuptake inhibitors (SSRIs) and anti-asthmatics, which are medications used for chronic conditions, have a substantial or good concordance between self-reported medication and dispensed pharmacy records. Medications taken for acute conditions, such as the antibiotics, folic acid and antihistamines, had a lower concordance when comparing both information sources. Several factors, such as the ethnic background may have played a role in the self-reporting of medication use.

Apart from pregnant women, inclusion of children is also not very common, although more accepted than in the past. Medications prescribed to children are often not approved for use for this particular age group as the safety and effectiveness have not been studied yet. Sometimes the risks are known, but even then, these medications may still be prescribed or dispensed. In chapter 3.1, we determined the incidence and prevalence of age-related contraindicated medications that were dispensed to children. The findings of this chapter show that a substantial percentage of children received a medication which was contraindicated for that age group. The results also indicated that information about the contraindication is not always consistent between different sources and that information about the risks is often limited.

The question to consider pharmacological therapy to treat ADHD symptoms in children has been discussed extensively. The decision to start treatment with medication does not only lie with the specialist or prescriber, but also their parents as children often rely on them for support and management of these chronic conditions. In chapter 4.1, we investigated the maternal sociodemographic characteristics as determinants of methylphenidate initiation, which shows that maternal education is an important determinant of methylphenidate treatment. Also, the child's sex and maternal ethnicity were found to be associated with initiating methylphenidate treatment, irrespective of the presence of clinically relevant ADHD symptoms.

Once children started treatment, several factors may influence adherence and persistence to treatment with methylphenidate. Chapter 4.2 shows that not only child's but also family characteristics play an important role in treatment adherence. These results also show that children starting at an older age and girls were more likely to be non-persistent than younger children and boys. Considering these findings, it is important for prescribers to take these into account when initiating methylphenidate treatment.

Drug treatment is often started during childhood, but it has also increasingly been prescribed at an older age. Chapter 4.3 of this thesis, indicates that methylphenidate, which was started during childhood, was continued in half of the study population when reaching the age of 18 years. The majority of this group started treatment at adolescence which may explain the reason for continuing treatment at this age. Furthermore, we found that ~25% of our study population had a medication possession ratio above one, suggesting misuse or abuse of methylphenidate. These data suggest close monitoring of methylphenidate use and dispensation of these medications, in particular to patients aged 15 years and higher.

Furthermore, we investigated the association between antidepressant use and the risk of suicide of which the results are presented in chapter 5.1. The results of this study did not indicate an increased risk of suicide after starting treatment with SSRIs, tricyclic antidepressants and other antidepressants when compared with past antidepressant use.

Finally, we have put results into perspective in the general discussion and give some future perspectives.