**Background:**

Evaluating the effectiveness of the STRIPassistant: a digital tool to optimize polypharmacy

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The Structured Tool to Reduce Inappropriate Prescribing (STRIP) is a method to perform a medication review. Part of this method is the pharmaceutical analysis.This analysis is digitalized into the STRIPassistant (demo video on [www.ephor.eu](http://www.ephor.eu)) in order to perform the pharmaceutical analysis in a quick and high quality way. The aim of this study is to evaluate the effectiveness of the STRIPassistant.

**Methods:**

Two cases of complex polypharmacy were optimized by an expert panel. For case A 17 appropriate decisions had to be made and for case B in total 20. Inappropriate decisions were discussed between two experts as potential harmful or indifferent. General practitioners (GPs) were asked to optimize case A as usual care. The instruction was available on a website. Next They were shown a short video explaining the use of the STRIPassistant and were asked to optimize the medication of case B. For comparison a paired t-test was used.

**Results:**

43 GPsperformed the optimization of the two cases. The number of appropriate decisions in case A was at mean 9.7, SD = 2.2, and for case B 15.3, SD = 2.1 (p = .000). In comparison to the expert panel the proportion of appropriate decisions increased from 58% with usual care to 76% with the STRIPassistant. No statistically significant difference between the numbers of harmful decisions was observed. The harmful decisions could partly be attributed to unfamiliarity with the STRIPassistant.

**Conclusion:** The STRIPassistant is an effective tool to improve appropriate prescribing.