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Title	Impact of risk communications and market withdrawals on prescribing of cyclooxygenase-2 inhibitors and non-selective nonsteroidal anti-inflammatory drugs
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#### Background and Aim

As gastrointestinal (GI) side effects are a common complication of non-selective nonsteroidal antiinflammatory drugs (nsNSAIDs), the potential cardiovascular (CV) risk of inhibitors of cyclooxygenase-2 (coxibs) has culminated with the withdrawal of rofecoxib (2004) and valdecoxib (2005). We aimed to analyse changes in drug prescribing and to evaluate whether GI and CV risk factors are taken into account.

#### Material and Method

Reimbursement data of > 80% of German community pharmacies for ambulatory prescriptions within the statutory health care system were evaluated. Between 2004 and 2007 changes of prescribing of coxibs and nsNSAIDs were analysed. Furthermore, the concomitant prescribing of medication indicative of potential risk factors was determined.

#### Results

In the fourth quarter of 2007, approximately 210,000 patients were provided with coxibs, whereas about 4.2 million people were treated with nsNSAIDs. The most dispensed substances were diclofenac and ibuprofen for 2.3 and 2.0 million patients, respectively. As a reaction of the market withdrawal of rofecoxib in September 2004, initially an increase in prescribing meloxicam, acetaminophen (both show a slightly selectivity for cyclooxygenase-2), and diclofenac-misoprostol could be observed followed by a long-time decline. In contrast since the end of 2006, the number of patients treated with naproxen increased continuously. In terms of the currently available coxibs, only prescriptions for etoricoxib increased slightly in 2006 and 2007 whereas prescriptions for celecoxib remained unchanged.

In the second quarter of 2007 compared to diclofenac and ibuprofen patients treated with coxibs more frequently received comedication with drugs for CV and/or GI indications. Almost 50 % of coxib treated patients also received proton pump inhibitors indicating (potential) gastrointestinal disorders compared to about 35 % of patients treated with ibuprofen or diclofenac.

#### Conclusion

These data indicate that new evidence of risks is taken into account. However, as many patients have concomitant GI and CV risks, it proves difficult to consider both adequately.

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