In the last few years the prescribing of NSAIDs in primary care has been slowly declining, probably reflecting increased concerns about safety. The gastrointestinal adverse effects have long been known, but cardiovascular problems only came to light in the past decade after the launch of the COX-2 inhibitors. There have been reports from primary care lamenting how hard it has been to change established prescribing practice, but is this made worse by even greater inertia among hospital prescribers?

Since 2006 the UK Commission on Human Medicines has issued a number of warnings about the cardiovascular (CV) safety of traditional NSAIDs. Low-dose ibuprofen (up to 1200mg per day) and naproxen have the most favourable CV risk profiles whereas diclofenac has a higher risk, comparable to the COX-2 inhibitors.1 Primary-care prescribing data has shown a notable decline in diclofenac use from 50 per cent of NSAID items prescribed in 2008 to 23 per cent in 2012, but this means there are still more than a million prescriptions for diclofenac each quarter.2 There is also wide variation in use between different localities.

GPs frequently complain that it is the hospital who initiates the NSAID. So, using hospital prescribing data we aimed to address the truth of this complaint and to support changes in prescribing by hospital trusts. IMS Health track all medicine issues for 99 per cent of NHS Trusts in the UK so it is possible to generate similar data to that widely available in primary care.

Five agents, naproxen, diclofenac, ibuprofen, celecoxib (Celebrex) and mefenamic acid, account for more than 98 per cent of all oral NSAIDs issued in hospitals. Our preliminary work in Southern England in 2010 indicated that ‘the hospital started it’ defence might well hold water, with diclofenac accounting for almost two thirds of all NSAID tablets and capsules used by the local acute trusts.

National hospital data (see Figure 1) shows a slow decline in overall NSAID use (expressed as defined daily doses) starting in 2011. Diclofenac use also starts to decline in 2011, with a steep reduction during 2013. Like primary care, however, there is still wide variation in use even within one geographical region (see Figure 2).

The overall picture seems to be that changes in prescribing following the first safety warnings started more quickly in primary care. However, hospitals have now caught up, with diclofenac down to 24 per cent of NSAID prescribing at the end of 2013. During 2008–9, the National Prescribing Centre ran an intensive programme on NSAID prescribing, focused on primary care, to try and address the problem of translating such new evidence into clinical practice, which links with the earlier changes seen in primary care.
It may also be easier to engage individual GPs and GP practices to adopt change in a gradual stepwise manner by encouraging early adopters to lead the way. In secondary care the barriers to change can be different as more often than not wholesale change in practice is required throughout the organisation or at least within specialty areas.

When we started to work with local hospitals there was a widely held perception that hospital use of NSAIDs was either short-term, where risks of harm were considered insignificant, or so specialised in relation to chronic use, that benefit was considered to outweigh risk. The main levers that subsequently seemed to drive change were regular feedback on comparative use, practical support tools and occasional use of quality or financial incentives (eg Commissioning for Quality and Innovation payments) by service commissioners. Clearly there are still a few outliers where little change has taken place and additional actions will be needed to improve safety.

**Conclusion**

Healthcare information companies are increasingly able to offer timely comparative medicine use information for hospitals. This will be one more useful piece in the prescribing jigsaw, helping to ensure a joined up approach to drug use across primary and secondary care. Use of NSAIDs in secondary care has changed significantly in the last few years and, in most areas, the move in favour of agents with low CV risk is now comparable with primary care.

**References**

1. MHRA. Cardiovascular safety of Cox-2 inhibitors and non-selective NSAIDs. July 2013.
3. East and South East England Specialist Pharmacy Services. Non-

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**Figure 2.** NSAID use by individual acute hospital in one locality, Q3 2013


**Declaration of interest**

Dr Livingstone and Ms Wright none to declare. Ms Fyfe is employed by IMS Health.

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