

GP use of tech helps prevent prescribing harm while saving NHS hundreds of millions

Academic analysis shows primary care prescribers have been preventing adverse drug reactions, harm and hospital admissions through safer prescribing, after using prescribing tech. The company behind the system also reveals that GPs have helped save hundreds of millions of pounds.

Prescribers throughout the NHS are preventing adverse drug reactions that can result in patient harm and hospital admissions, after using technology to adopt safer prescribing practices, new academic analysis has suggested.

Kent Surrey Sussex Academic Health Science Network (AHSN) carried out an analysis of benefits GPs and other primary care prescribers achieved through a prescribing decision support system called FDB OptimiseRx, currently used in around two thirds of practices in England.

Focussed on a small sample of medicines and associated best practice alerts issued by the system to general practice prescribers, the analysis showed consistent impact in reducing preventable adverse drug reactions, which have historically been linked with 10% of hospital admissions in older people and a cost to the NHS of £800 million per year.*

The analysis showed:

- **More than 26,000 falls may have been prevented for elderly patients in a single year.** The review examined healthcare professionals' use of the prescribing decision support technology to avoid risky prescription of anticholinergic drugs in elderly patients with dementia or a history of falls, that might then result in potential adverse side effects. These side effects could include impaired cognitive function and further falls. The analysis for 2019/20 calculated that 26,000 falls may have been prevented after it compared the many thousands of times primary care prescribers accepted messages presented through OptimiseRx, against the assessed risk of a fall to patients in question.
- **Reduced hospital admissions for patients with renal impairment.** The OptimiseRx system offers prescribers the opportunity to consider an alternative treatment to using nitrofurantoin (an antibiotic used to treat urinary tract infections) for patients with severe renal impairment recorded in their medical record. Nitrofurantoin is not effective in these patients, leading to undertreatment and potential progression to urinary tract infection. Based on the more than 6,500 times prescribers accepted the message, the analysis calculated a reduction in urinary tract infection-related inpatient stays during first line treatment, representing a potential gross benefit of £575,000 over five years from 2019/20.
- **Improved quality of life for patients not developing acute kidney injury.** Thousands of prescribers accepted a message presented by the system around an increased risk of acute kidney injury (AKI) associated with non-steroidal anti-inflammatory drugs (NSAIDs) when co-prescribed with diuretics and renin-angiotensin system drugs. The review noted that prevention of AKI would lead to improved patient quality of life.
- **Reduced gastrointestinal bleeds, haemorrhage recurrence and outpatient visits.** The analysis also highlighted a marked impact from prescribers accepting OptimiseRx messages to consider prescribing a gastroprotective agent when prescribing a combination of antidepressant selective serotonin reuptake inhibitors (SSRIs) with aspirin or another NSAID. This could help reduce risk of gastrointestinal bleeds, including recurrent haemorrhage, and thus reduce the

need for inpatient and outpatient treatment of these gastrointestinal side effects. Studies have shown the detrimental effects of combining SSRIs and NSAIDs.

Separately to the AHSN findings, which were commissioned by FDB (First Databank), the company reported that prescribers have now achieved more than £225 million of savings through the OptimiseRx system since it was first introduced into the NHS in 2014. This included £179m through alerting professionals to more cost-effective medicines, and £46m in costs avoided – such as following NHS England guidance when not to prescribe certain items.

Darren Nichols, Managing Director at FDB, said: “The issue of reducing severe and avoidable medication-harm has been an important global challenge for several years, with ambitious targets by the World Health Organisation to secure action.

“There is a huge estimated cost to the NHS each year from adverse drug reactions but limited formal data and analysis. The research aims to begin to build a picture on what progress is being made overall and assess the benefit in primary care from prescribing support and guidance.

“In the case of reducing adverse drug reactions, the AHSN analysis has uncovered some significant benefits – ranging from reduced hospital admissions linked to prescribing behaviour around one medicine, to tens of thousands of falls prevented for elderly patients by supporting changes in prescribing decisions.

“This is based on an examination of only a very small sample of the many thousands of different types of messages presented to staff in primary care every day through the system – a snapshot of what prescribing tech could deliver for safer prescribing at a time when the UK and the world is striving to reduce medicine related harm.”

ENDS

Notes to editors

*** On the cost of adverse drug reactions to the NHS**

“Preventable adverse drug reactions are responsible for 10% of hospital admissions in older people at a cost of around £800 million annually” (Davis & Robson, 2016).

About FDB

FDB (First Databank), part of the Hearst Health network, is the leading provider of drug knowledge that helps healthcare professionals make precise decisions. With thousands of customers worldwide, FDB enables our information system developer partners to deliver valuable, useful, and differentiated solutions. We offer four decades of experience in transforming medical knowledge into actionable, targeted, and effective solutions that help improve patient safety, operational efficiency, and healthcare outcomes.

About FDB OptimiseRx

FDB OptimiseRx[®] is the leading medicines optimisation solution for primary care in the UK. OptimiseRx combines evidence-based best practice, safety and cost-effective prescribing messages, and delivers them in real time at the point of care during the prescribing workflow.

In use in more than 4,000 GP practices covering over 38m patients across the UK, OptimiseRx is the gold standard for prescribing decision support and medicines optimisation.

OptimiseRx is the only solution that delivers patient-specific prescribing guidance, integrated with prescribing workflows, supporting medicines optimisation at the point of care in EMIS Web, TPP SystmOne and Microtest Evolution. Tailored to the patient medical record, OptimiseRx takes into

consideration current and previous medications, morbidities, observations and measurements to support prescribers to make the safest, most clinically appropriate prescribing decision.