Read how JAC's EPMA is delivering integrated pharmaceutical care services in Scotland at NHS Ayrshire and Arran

Electronic Prescribing and Beyond
www.jac.co.uk

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Richard Cottrell, Senior Clinical Pharmacist and HEPMA Pharmacist

in association with

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Customer needs met

- Hospital-wide replacement of paper-based prescribing with a full, electronic system

- Improved legibility of prescriptions delivering an overall reduction in drug dispensing & administration errors

- Routine use of electronic prescribing data for auditing & customised reporting

- Workflow integration with pharmacy

- Full delivery of the system via wireless technology and mobile devices - enabling bedside prescribing and administration

Executive summary

Ayr Hospital chose JAC's HEPMA solution to replace its paper (drug chart) prescribing system. The JAC solution introduced a range of usability and functionality enhancements - including support for bedside administration - as well as decision support capability and more detailed reporting.

The JAC HEPMA solution has extended the benefits of electronic prescribing throughout NHS Ayrshire and Arran (NHSAA), delivering integrated medicines management in conjunction with the hospital's pharmacy system.

Clinicians can also make use of bedside medicines administration facilities as well as auditing and reporting tools to help monitor prescribing patterns and infection control protocols quickly and accurately.

Ayr Hospital – an early adopter of e-prescribing

Ayr Hospital opened in 1991 and is operated by NHSAA, which serves a population of around 350,000. The hospital was an early adopter of electronic prescribing when it conducted an e-prescribing trial demonstrated a clear reduction in medication errors and improved quality of prescription writing.

Ayr Hospital worked collaboratively with JAC to develop their solution to address key clinical requirements. This solution was rolled out across six wards, including admissions, coronary care, orthopaedic, and general medical wards.

The response from users was extremely positive, with the benefits of legibility, reduced errors during prescribing, administration and dispensing, and information being available directly at the point of need all being reported by users.

The ability to share this information in other wards and the pharmacy dispensary further helps to improve the accuracy and rapid access to key information.

The system has now been deployed across 22 wards in Ayr and Biggart, including speciality wards including high dependency, surgical high dependency, long stay and care for the elderly.

Refining the solution, reaping the benefits

The HEPMA solution and Pharmacy Management modules form a single, integrated system, covering all NHSAA hospitals on a single system.

The integration of hospital prescribing and pharmacy allows end-to-end medicines management processes that handle the complete cycle from prescribing, clinical verification and dispensing, to drug administration by nursing staff.

The hospital's use of customised drug trolleys on wards allows the Board to push the boundaries of advanced patient care. These feature a mobile terminal with wireless connectivity, enabling staff to prescribe and administer medicines at the bedside. This enables staff to spend more time with patients, reducing errors and improving the patient experience.

Another key feature is the clinical decision support capability, using First Data Bank's Multilex database. This provides access to detailed, real-time information and alerts on drug duplications and potential side-effects.

Clinical staff use this information during the prescribing process to minimise risks to patients.

In-depth reporting

The JAC solutions reporting functions have been welcomed by staff according to Michele Caldwell, Director of Pharmacy at NHS Ayrshire and Arran, and have proven very useful for auditing and management purposes.

Medication usage reports produced from HEPMA data help to manage appropriate and prudent use of antibiotics on wards. Clinicians are able to use the reports to get an immediate overview of patients with prescribed antibiotics, and then see how quickly treatment was administered.

This also gives the hospital a detailed record of any restricted antibiotics or combination regimes. Without e-prescribing in place, this level of information would simply not be readily available.

Michele Caldwell said: *"A key benefit of reporting is not just the historical, but also the real-time reporting, which is used for day-to-day updates. For example, real-time reports of specific antibiotic prescriptions can be produced to enable daily infection control monitoring; similarly with anticoagulants for thromboprophylaxis.*

"This gives doctors the latest information on what is being prescribed and why during their daily rounds, so they have a completely up-to-date picture. Historical reporting also enables clinical pharmacists to monitor their workload and allows non-medical prescribers to check their prescribing for any given day."

Users can also conduct more in-depth analyses of the information in the JAC HEPMA database, using the system's reporting tools to derive values and display results in a range of easy-to-use formats.

Integration with pharmacy management has also helped minimise the administrative overheads of maintaining accurate levels of ward-held drugs.

In addition to in-depth reporting, e-prescribing also contributes to improved patient safety by reducing the risk of various types of medical errors such as clarity of prescriptions with hand-writing illegibility. It also mandates data entry, such as Allergy recording, so that other members of staff have this information immediately available when prescribing medication.

In addition to enabling closer control and better monitoring of the usage of high-risk medicines such as Warfarin, the solution also improves communication by producing immediate patient

discharge letters, helping to eliminate unnecessary hospital waiting time for patients.

Ongoing developments

The next phase for the Board is to upgrade to JAC Enterprise Release Version 5, which will enable support for multiple sites on a single system with a common master drug catalogue, supplier file and patient file. This will be the foundation of the planned e-prescribing rollout to the Board's Crosshouse Hospital, which is expected to be complete in early 2012.

During the migration to Version 5, the Board will also retire its legacy database to enable the deployment of a clean, fully updated database.

Richard Cottrell, senior clinical pharmacist and HEPMA pharmacist for NHSAA said: *"Developing the e-prescribing system is an ongoing process, and it has to integrate well with our systems and working process as our needs evolve. We have a close working relationship with JAC, which has enabled us to tailor the way we use the solution to our needs.*

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About JAC's EPMA system

JAC has the largest installed base of Electronic Prescribing and Medicines Administration (EPMA) systems in UK hospitals. These systems improve patient safety by reducing prescribing and administration mistakes that could result in medication errors and adverse drug events.

EPMA also facilitates wider improvements in clinical practice, including: reductions in paperwork and transcriptions; improved audit trails for medication; performance monitoring and intelligence; enhanced reporting capability to review practice, improve future care and deliver management and financial information such as reporting for PbR; greater consistency and continuity of care between primary and secondary care settings; and more effective communication between hospital departments and pharmacies.

The system incorporates the UK's leading drug database, to support safe and effective electronic

prescribing through its clinical checking. This allows the system to check for drug-drug interactions, sensitivities, drug doubling and duplicate therapy, therefore reducing the risk of medication errors and increasing patient safety.

Find out how JAC's electronic prescribing solution can deliver measurable benefits to your organisation. Visit www.jac.co.uk or call +44 (0) 1268 416348.