

Read how JAC are helping
Great Ormond Street Hospital
extend the reach of their
medicines management
systems through implementing
EPMA for children's health.

Electronic Prescribing and Beyond

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in association with



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Christine Booth, Senior Pharmacist at Great Ormond Street Hospital

Customer needs met

- **Trust-wide roll out of second-generation Electronic Prescribing solution**
- **System specifically tailored to incorporate factors related specifically to paediatric prescribing**
- **Improved quality and accuracy of prescribing with complete and legible prescriptions meaning overall reduction in errors**
- **Using electronic prescribing data as audit & reporting tool**
- **Clinicians able to access system using handheld wireless devices**

Executive summary

London’s Great Ormond Street Hospital (GOSH) has become the first specialist paediatric hospital in the UK to complete a Trust-wide roll out of electronic prescribing.

The hospital has replaced its paper prescribing system with an Electronic Prescribing and Medicines Administration (EPMA) system from medicines management specialist JAC. The system is currently live in all patient wards apart from in the intensive care unit.

At GOSH, JAC’s EPMA system has automated core processes, reduced prescribing and drug administration errors, and improved staff efficiency. Furthermore, together with JAC, the Trust’s electronic prescribing project team is also using powerful auditing and reporting tools that help key staff, such as anaesthetists, clinicians and microbiologists, to monitor prescribing and infection control protocols quickly and accurately.

Background to deploying e-prescribing

Great Ormond Street Hospital first opened its doors in 1852 as the Hospital for Sick Children and was the first hospital in the UK dedicated to children.

Today, Great Ormond Street Hospital for Children NHS Trust (GOSH) is a national centre of excellence in the provision of specialist children’s healthcare and currently delivers the widest range of specialities of any children’s hospital in the UK.

In 2005 the hospital Trust wanted to improve patient safety by improving the quality of prescribing and looked to reduce the incidence and severity of prescribing and administration errors and the level of risks associated with manual paper systems such as badly completed or illegible prescriptions and lost charts. The new system would be an important part of the electronic patients records model.

The solution

GOSH decided to deploy JAC’s Pharmacy Management system and EPMA solution, following a tender process. JAC was chosen for the project because its solution fully met the hospital’s requirements, and was also cost effective.

The system incorporates the Multilex Drug Data File from First DataBank Europe. This data provides the system’s clinical users with patient specific clinical decision support to actively check for drug-drug interactions, duplicate therapies and drug allergies.

Further benefits are expected following the future implementation of additional decision support functionality, such as dose checking.

GOSH initially evaluated the solution across its nephrology department, surgical wards and dialysis unit for a period of six months to assess its benefits and the impact of its use on all ward staff including nurses, doctors, pharmacists and healthcare assistants.

Paediatric prescribing – a key issue

JAC's EPMA product had been proven in the adult market, but with dosage in paediatric prescribing not being standardised as it is for adults, it was important that the solution was able to deliver functionality required in a paediatric hospital.

Working with GOSH, JAC were able to configure the EPMA solution to cater for key paediatric requirements, incorporating specific requirements for ensuring variables such as weight and body surface area are recorded into the solution to ensure the correct dosage for each individual child can be calculated.

Christine Booth, Senior Pharmacist at GOSH, said: **“The paper-based prescribing process has many points of weakness which an electronic medication record can instantly address such as illegible handwriting or missing patient/drug info both of which can have serious consequences. Implementation of JAC's EPMA system has already shown to deliver early benefits in medication safety. However, there is scope for future benefits as the software develops to support more complex prescribing and administration.”**

The solution also easily integrates with the hospital's existing IT systems such as single-sign-on, maintaining access security and avoiding costly infrastructure changes. In addition EPMA accepts messages from the patient administration system, automatically registering onto the electronic prescriber when patients are admitted or discharged, saving staff from having to input information multiple times.

The benefits of EPMA

During the initial evaluation the hospital quickly saw the benefits of better accuracy and clarity of prescriptions, reduced paperwork and better audit trails using the JAC system. The solution was rolled out across the rest of the hospital as a project the following year.

Dr Stephen Marks, consultant paediatric nephrologist at GOSH said: **“Before we started using EPMA it was common place for nurses to call colleagues after their shift to double check if elements of a complex medication schedule had been administered to a patient. This problem has been completely resolved by the introduction of EPMA.**

“Since migrating to electronic prescribing and medicines administration, clinical staff have become empowered and are now able to view legible patient records, with no confusion or misinterpretation. This undoubtedly streamlines the entire process and supports staff to help them make the right decisions for patients.”

Furthermore, EPMA has also offered the opportunity to maximise the responsiveness of the service provided by the pharmacy department with electronic transmission of newly prescribed drug items and discharge prescriptions to the dispensary for dispensing.

The EPMA solution also provides comprehensive reporting with a range of built-in standard formats. For more in-depth analysis, users can export data from the JAC EPMA database using the system's reporting tools to derive values and display results in a range of easy-to-use formats.

E-Prescribing: the future

Going forward GOSH plans to roll out the EPMA solution to its intensive care unit. Furthermore, a paediatric dose-checking function, to confirm whether the dosage being administered is correct for any given child, will also be incorporated into the EPMA solution.

Robert Tysall-Bay Chief Executive for JAC, said: **“This is a major milestone in the collaboration between JAC and GOSH. The prescribing and administration of medicines for children is often complex and the effort, involvement and lessons learnt from developing and implementing software to replace manual systems should not go unrecognised. Work continues to further enhance the system and we look forward to a continued collaboration with GOSH.”**

About JAC’s EPMA system

JAC has the largest installed base of Electronic Prescribing and Medicines Administration 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; reporting (including 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-pharmacy.co.uk or call +44 (0) 1268 416348.