

# Reducing prescription errors

Reducing prescription errors: how PatientSource is enabling safer, more effective patient care

The Royal Hospital for Neuro-disability (RHN) is a national charity hospital and research centre that provides rehabilitation and long term care to people with complex neurological disabilities caused by damage to the brain or other parts of the nervous system.

Based in Putney, south-west London, it has beds for around 220 patients and includes the provision of specialist services on bespoke wards, including a ventilator unit, wards for Huntington's Disease, and a behavioural unit.

### The challenge

As an independent medical charity that is not funded by the NHS, the RHN had not previously had the capital funds to invest in new technology infrastructure and as a result, has been predominantly operating using paper-based records and work processes. But when the hospital recently became more financially secure, it took the decision to change this beginning with investment in an e-prescribing system. Michael Marrinan, Medical Director at the RHN says: "This is the first step in our plan to move the hospital onto a full EPR solution and is part of our ambition to move from paper to a fully digital system. We essentially want to use modern technology to provide visible accountability and to further drive up our standard of care."

The decision to start the EPR implementation with an e-prescribing module was due to the immediate positive impact it could have on patient care, improving patient safety and reducing medication errors.

Marrinan says: "Our patients have complex needs and many are on significantly more medications than your average hospital patient. Our staff have between 30-40,000 drug interactions a month and while our incidence of drug errors was very low, any incident is one too many."

But, despite finding themselves in a more positive position financially, the RHN only had a limited budget for the project and Toby Roberts, Associate Director of Information and Technology at the RHN, knew that the hospital could not afford for the project to fail.

He considered eight suppliers during the tender process before selecting PatientSource's e-prescribing solution. "PatientSource was a less risky option than procuring a big-name solution," he explains. "It doesn't require any extra specialist hardware or apps - all it requires is a web browser, which means that it also doesn't add to our existing resource costs."

He adds: "We could also see that regardless of the cost this was the leading system, so the decision to choose PatientSource was a moral one - how could we justify going somewhere else?"

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## The solution

The new e-prescribing module replaces the hospital's traditional card drug charts. Its intuitive, easy to use platform has the benefit of increasing patient safety through its automatic prescription checks alerts, which includes checking all prescribed drugs against known patient allergies, checking for drug-drug interactions and checking for the appropriate dose, route and frequency of administration.

Roberts explains that PatientSource was the only provider that could meet their needs. "We did have initial concerns about how the system could be so good at the price that it is," he says, "but we met the team and they gave us full access to the system during a demo and we just knew that this was the system that we needed."

One of the major benefits of PatientSource was that the system was designed by a practising clinician - something that Roberts says was abundantly clear from the intuitive nature of the system. "It wasn't a software sales exercise, it was a clinical solution that we could see would improve how our staff work and how they care for our patients." Sophie O'Kane, EPR Lead at the RHN, adds: "The fact that the Medical Director of PatientSource is a doctor is invaluable - there's the weight of clinical knowledge behind the system. That is why it works so well."

## Speed of implementation

The RHN took the decision to introduce the e-prescribing solution on four wards before rolling out the solution across the hospital. Roberts and O'Kane worked closely with the PatientSource team ahead of the implementation to ensure that the technology met all of the hospital's specific requirements - many of which were unique to the RHN due to the complex needs of their patients.

Remarkably, it took just three months from Roberts receiving the go-ahead for the project to PatientSource being live on the wards. O'Kane says: "This was a conscious decision on our part and PatientSource were able to deliver for us. When bringing staff on board with new technology there is an element of cultural change - it was a transformation project. We needed to get them on board quickly and let them see the benefits for themselves."

PatientSource provided full training for all staff that would be switching to the new system. O'Kane explains: "We used the opportunity of migrating our patient records into the system as a training exercise. This helped to get our staff familiar with their system, because they could add several in one go, and it also gave them the opportunity to provide feedback and to request changes to the system to meet their needs."

The PatientSource team was also on-hand to provide support in the week that the system went live on the wards. Marrinan says: "The PatientSource team physically moved into the building, it was exceptional. They were physically there, standing beside people and showing them what to do. And when the night staff came on at 8 pm, anxious, they'd be there again showing them how the system works."

## Staff benefits

The new system has proved incredibly popular with staff at the RHN, who recognise the benefits it brings to patient safety and the standard of care they can provide.

Jessica Roth, Clinical Fellow, explains that she covers several wards during her shifts at the RHN. "If I get called from another ward asking about a prescription or needing a change to a medication, I would previously have had to either rely on the nurse relaying the information over the phone, or I would have to stop what I was doing and go to the other ward to find the paper charts and then deal with the enquiry. This takes time which ultimately takes your attention away from the patients. Now, I can access information remotely on our tablets via PatientSource without having to dig through paper files."

She adds: "Drug errors happen constantly in all areas of healthcare. But if you've got an EPR it removes a layer of risk. There is so much opportunity for error - misreading someone's handwriting, for example - but with PatientSource the potential for risk is reduced."

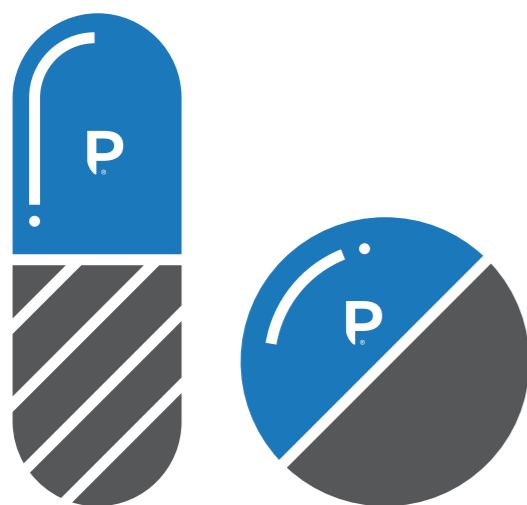
One of the reasons that the technology has proved a hit with staff is that the system mirrors the look of traditional paper drug charts. Roth says: "If you look at it, it's like looking at an old-school drug chart - it's so reassuring. In a stress response, you want to communicate what you're seeing clearly, and so reducing unfamiliarity makes everything much safer."

This familiarity has meant that staff have found the system very easy to use. Justin Finbow, Ward Manager, said: "It really is paper on screen. My previous experience of EPRs and e-prescribing is that when you move to digital systems, you lose that ease of use, but that's not the case."

Although Finbow took part in the training provided he believes he could have picked up the system and used it without any training at all. "If you can operate a phone, you will be able to use PatientSource. It really is that easy."

This ease of use has led to real benefits for Finbow. He says: "As a nurse, I can start a shift and click on a patient in the system and immediately see what medication they need in the next hour. Allergy status is more reliably and consistently communicated. I spend less time chasing staff for updates, clarifying prescriptions, re-writing drug charts - it releases time to care for our patients."

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## Customisation for the RHN's unique requirements

When Roberts and O'Kane began scoping the requirements for the e-prescription solution, they recognised that there was an opportunity to also support the hospitals' team of dietitians. Due to the patients care requirements, every patient is under the care of the dietitians, with as many as 60-70% requiring all, or some, of their food and hydration via feeding tubes.

Emma Craig, Clinical Lead Dietitian, explains: "As dietitians, we need to look at what a patients' feeding requirements are and also consider what medications they are on and how they might interact with food or enteral feed. Sometimes we may have to stop a feed as a medication needs to be administered on an empty stomach or we may need to change feed times."

Previously, every time the team had to make an alteration to a patient's feeding regime, they needed to print off multiple copies of a form and have a registered nurse sign the feeding regimen. "We don't have to do that now. We don't have separate signing sheets and, as there's less paper, there are fewer error risks."

While the PatientSource system wasn't originally designed to support this use, the system has now been customised to fully support the dietitian team. This included bespoke functionality to give prompts to the nursing staff to offer the patients extra food and snacks.

Craig said: "For many of our patients, this is their home. We want them to have extra food and snacks to meet their nutritional requirements. Previously, as these were not necessarily medically required, they might be forgotten, but now the staff have prompts."

The digital system has also resulted in improved audit trails, which Craig says is not only a benefit for governance, it is also improving patient experience.

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"We can immediately see if a patient is refusing a nutritional supplement and we can look to see if there are patterns. Is it that they always refuse a strawberry supplement, or does it always happen at a certain time of day? Before it was less clear. We would have to find a paper chart, which may have been archived. If we wanted to look back over several weeks, that would involve looking through the archives for a lot of charts, which took a lot of time. We can make changes to help meet the patient's needs, which we hope means that they are happier."

## Exceeding hopes and expectations

At just one month into the implementation of PatientSource's e-prescription module, the RHN were already reaping the benefits with an 83% reduction in prescription errors (from six incidents in April 2018 down to one during April 2019).

Marrinan said: "We are lucky that we have a culture of incident reporting - which we encourage because we need to learn from our mistakes. Our patients sometimes can't speak for themselves so we have to speak up for them. Our aim is to have a high level of reporting but a low level of harm and PatientSource is helping us to achieve this."

The hospital has continued to see positive results in the months following the switch from paper to e-prescribing. Roberts adds: "There's no hiding place for medical errors. If medication is not given at the correct dose, at the correct time, then we can see. With paper systems, there is a less obvious audit trail and so errors can be missed. It gives our management the confidence to make changes based on evidence rather than gut feelings."

Looking to the future, the RHN are already planning on adding PatientSource's e-observations solution to the existing four wards using the e-prescribing module before rolling the system out across the remaining hospital wards.

O'Kane says: "Our staff keep asking us when they can use more elements of the system and when they are going to have full access. Those wards that don't have it are asking for it. I think that is a very strong testament for how good the system is."

Summing up the whole experience with PatientSource, Marrinan says: "We can't fault the service that PatientSource have provided. They have dealt with any issues that we have experienced very quickly and have ensured that the system works for us. What they have done for us has exceeded all of our hopes and expectations."





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