

**Any data or transcribing issues from paper to electronic? Any data degradation issues seen? How long did the transcribing process take?**

*Nicola Vosser- lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)*

Each transcribing team had 3 or 4 pairs of transcribers and checkers, a runner and an ePMA team leader. We predominantly used pharmacists and some NMPs but the checker was always a pharmacist and therefore would have picked up any transcribing errors - there were no datix reports of transcribing errors. Apologies I don't understand what 'data degradation issues' are? The ePMA team were not involved with the technical aspects of data migration. Transcribing varies depending on the type of ward, whether it's the first ward the team transcribes and how familiar the teams are with the ePMA system. As an example, our first wards took the longest, but they were also the downstream medically stable wards where patients were generally on more medication: 30 patients, 4-5 hours, a transcribing team of 3 or 4 transcribers and checkers. Paediatric and maternity wards on average took about an hour. We completed all medical and surgical wards on the Tuesday with 3 transcribing teams and all the paed and maternity wards on the Wednesday with 2 transcribing teams.

*Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)*

I didn't go through cutover, but I can share my experience of this process... epic had a few different options and I have experienced two go lives so can share both processes

- 1) GOSH – Moved over easter weekend, as a tertiary centre, we could control activity a lot of more so reduced admissions and pushed discharges. A big push to optimise drug charts before that weekend too. Also only have around 300 beds. JAC reverted to read only in the morning. An army of pharmacists sitting in a room from 7am till about midday transcribing all information from JAC print outs to epic. EPR team available to instantly fix issues – there were a lot of issues where simple drugs were not built correctly! (Hence my testing emphasis). I think there was a separate army of doctors and nurses transcribing essential bits of info from medical notes and obs. EPIC transferred some legacy data automatically e.g. labs, scans, scanned documents. Chemotherapy protocols were all transferred over a two-week period before go live. Unofficially I pretty much checked every single patient one by one as this was my area of work and the work was done by all the consultants so a variation in the quality of chemo cut over. There was a constant process to update epic and legacy systems for the week before go live which was challenging and needed a more formal process but we worked it out as we went along. We ran a few elective theatre lists and opened up oncology day care over the bank holiday with limited patient numbers to get used to the system in real life. We also manufactured chemo intentionally over the weekend again in a controlled manner.

I think this process went well and the people who were heavily involved in configuration were able to do significantly more and quicker. Careful thought about oncology cutover needs to be thought about.

- 2) Royal Devon and Exeter – I don't know all the details, but I went for their go live. They had armies of pharmacists transcribing meds onto epic over the week before go live, MMTs were adding drug histories and pharmacists were adding current drugs. They then had a tidy up process to cross check discrepancies before go live. I don't know all the ins and outs of this, but they were moving from paper to electronic so a bit different to GOSH.

Also getting outside help who are familiar with the new system is useful but your own staff having dedicated time for this is essential. Almost one team need to keep the place running and a separate team pick up cut over in the preceding week or two.

**Would be interested to discuss why you would transcribe from an EP system to paper and then transcribe again to the new system - primarily because we'll be doing it this summer. I'm assuming it's to stop people using the legacy system for other things, but I'd like to question though - is it an efficient use of time and is there not a doubling of opportunities to make a transcribing error.... especially when we could in theory continue with prescriptions on the current system?**

Nicola Vosser- lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

When changing your EPR supplier your legacy system is switched off completely – you move into a period of downtime whilst your new EPR system becomes active as data is migrated and the system is tested. For us this was done over a weekend period. The legacy system needs to be switched off to take the last data dump for the data migration – this is a snapshot at the last point before the system is switched off. For a full EPR replacement like we had, one couldn't keep the two systems running in tandem. Therefore when changing EPR suppliers, transcribing drug charts are NOT from legacy EPR to new EPR (electronic to electronic), it will be from downtime paper drug charts to the new EPR system. Therefore, you have to go electronic → paper → electronic. How to manage this downtime period was an area involving complex decisions for the Trust and a detailed options paper was written. To summarise, some of our options at CW were:

Option 1: use existing downtime drug charts (printed directly from LastWord) however our current set-up only had a 48-hour view - 24hr look-back and 24hr forwards for dose administration. Since the downtime was likely to be 5-7 days, we had to look into developing our existing downtime charts to cover a 7 day downtime period. Patients admitted during the downtime used a traditional paper drug chart.

Option 2: use traditional paper drug charts which would increase flexibility for 2 weeks if delays occurred during cutover. The drawbacks are that you end up with two transcribing events which are resource / time heavy:

- Stage 1 from legacy electronic (LastWord) to paper
- Stage 2 from paper to new electronic (Cerner)

Decision at CW was to develop our LastWord downtime drug charts to extend to 7 days and print these directly using our downtime contingency plan for LastWord – the ePMA team co-ordinated the printing and disseminating (with the help of hospital volunteers) to run the charts to the wards. This only took about 2-3 hours on the Friday morning and didn't have a resource burden.

**Did you use pharmacy technicians at all?**Nicola Vosser- lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

Yes, we have a pharmacy technician in the ePMA team and since we implemented ePMA during working hours, whilst pharmacists were actively involved in the transcribing teams, the MMTs were managing the bleeps for the service to maintain a business as usual on the wards.

Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)

No, not at GOSH, but at RD+E the MMTs added drug histories onto the system.

**Can you supply a list of your reporting requirements?**Nicola Vosser- lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

Reporting is still a work in progress.

Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)

Reporting is a whole can of worms that I hadn't covered in my talk. The complexity of an integrated EPR means that data models are also incredibly complex. Where multiple systems are used, it is easy to ensure discrete data sets are maintained. In epic, the prescribing, dispensing and administration is all linked. While most of the time the workflow will flow well for data purposes, there are always tangents and caveats that will unexpectedly mess up workflows. An example is when dispensing a high cost drug in advance, the dose is not administered on the day expected but moved to a different day (happens all the time as we all know), our system doesn't handle this very well as the dispense is now not linked to the administration (in some cases). This is just one example of many different tangents and scenarios that I have helped work through. Having someone in the organisation who is aware of all these tangents and can help advise what happens in real life is essential, working with the reporting and finance teams to get the right info. Additionally, the rich data still requires base report building, validation and as the data is so complex, this is a lot of work. It also is difficult to do before go live as workflows and build may change (plus time constraints). Consideration about resource and time in this area should be factored in. It is also important to highlight that if finance is affected, it

becomes a high priority and will take a lot of management time. At gosh, we have now put a post in within pharmacy as someone who will lead of reporting and learn reporting skills.

**What level of training did staff on the wards have before go-live and how far in advance was training given? Was it online learning or face to face/in groups?**

*Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)*

Training for the Trust started 2-3 months before go-live (admin staff had training earlier and clinical staff working during the immediate go-live period were trained closer to the time although dates running up to the go-live date were not released until all training dates were booked in month 2 and 3 before go-live). Training was on a specific training domain, in classrooms with a trainer. Since we replaced our entire EPR system all staff had to be trained depending on their role. The ePMA team were responsible for reviewing the ePMA aspects of all the training documentation for all the user groups and this often formed a very small portion of their general training as training times had to be kept to a minimum to ensure all staff in the Trust could receive some level of Cerner training before go-live. Training is supplemented by videos and quick reference guides for complex workflows which can be found on our hospital app and the intranet. The ePMA team train all pharmacy staff (one-one) and this normally takes about 2-3 hours. Before go-live we did this in groups of 3-4 about 4 sessions per week, 2 months before go-live. We also booked a training room 2 weeks before go-live and had drop-in sessions for anyone (doctors, nurses, NMPs, pharmacists, dieticians etc) wanting to practice using the ePMA workflows and the team were available on-hand to answer questions.

*Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)*

Face to face classroom-based learning with a test system. 'Super Users' had training a bit earlier than general users. Unfortunately, the workflows were not quite ready at the time of training even though this was 2 months before go live. There were a lot of unanswered questions during training. This could have been done a lot better but also the challenges with a first epic build for pharmacy in the UK made it harder to deliver to the time scales.

**How big is the pharmacy/ePMA team @GOSH and Chelwest and did the implementation of Epic/Cerner increase resourcing requirements for system optimisation?**

*Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)*

ePMA team at CWFT has 3 pharmacists and 1 MMT. Since we are on the shared domain with Imperial College Healthcare Trust, we work closely with their ePMA team and all medicines builds going forwards require collaboration and agreement from both organisations. During the first week of go-live the Imperial ePMA team helped us with 3 extra resources to be available as floorwalkers to assist the pharmacy teams. We had some additional resource from the transformation team during the planning phase and immediate go-live period.

*Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)*

Legacy – two technicians within ICT maintaining JAC, Powergate, Ascribe and reporting, half a pharmacist leading on EPMA

EPIC install – 2-year pre go live – I don't have exact numbers but an EPR pharmacy team of about 10-15 analysts – mixture of pharmacists, technicians and non-qualified people in a wider team of about 70 within the EPR programme. The big downfall for GOSH was there was no one within pharmacy co-ordinating or having dedicated time outside of our chief pharmacist. While the EPR team consisted of mainly ex GOSH pharmacy team, it isn't the same as having people embedded within teams working on configuration. The exception was that in oncology, but to the need for specialists to be validating chemotherapy protocols, myself and several our oncology team were heavily involved in the build for oncology. I also heavily worked on oncology manufacturing.

Post go live – EPR Pharmacy Team about 7-10 people and merged with the EPR oncology and research team. One year post go live, realisation that someone in pharmacy needed to provide leadership and direction – pharmacy information officer 0.5wte employed (me) and a rapid realisation of the scope of the role leading to two full time technicians, one with a reporting hat on, to help co-ordinate the programme and optimise things. We are still working on these roles but want the operational areas to take responsibility, but the technicians help a lot of the in-depth work, analysis and have the time and headspace to work through issues and come up with solutions. They will also help with training and monitoring of the system. The technicians are assigned to different areas of pharmacy and long term the EPR team will also work directly with each area

of pharmacy. We have established working groups as a regular forum to help optimise things and track issues.

**Did you group the wards in any order? We did something similar and decided to start in low turn around wards, keeping admissions units until the end.**

Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

We did the same at all our ePMA implementations → start at the stable downstream wards and work up to the more acute areas with AAU and A+E last to go-live. We sent a small team back at the end of the day to transcribe admissions to areas after we had taken a ward live and then hand-over to the BAU team.

**Where do Hackathons get listed / how to get involved in these?**

To find out more about the Hackathons and INTEROpen, please register your interest via this [link](#)

**Did you migrate meds data in your go live or just transcribe current episodes?**

Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

Drug charts couldn't be migrated from the legacy system to the new system due to the drug catalogues being completely different.

Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)

Just new drugs added. Lab results could be imported. JAC was available read only for a while.

**Were there any contingency plans?**

Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

Yes, contingency was built into the plan for the project with decision points at all stages of the cutover. In terms of ePMA, we had contingency by extending the downtime drug chart to cover 7 days (instead of 48 hours) which meant we could stay on these for a few extra days if transcribing had to be delayed. We also ordered paper drug charts should we need to convert to these for any reason, enough for the whole hospital and plenty more! New admissions during the downtime period were on paper drug charts and if a downtime drug chart became unusable, these were transcribed to a paper drug chart by the clinician during the downtime period.

Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)

There were a lot of time points and clear decision-making processes across the trust. It was also very clear and easy to raise issues. I remember raising an issue to my oncology head of service (even though it was a pharmacy issue) and it was worked on and resolved over night! The trust had a gold/silver/bronze reporting structure.

Legacy systems were all available as well as the official new downtime procedure.

**How long do you give to do UAT testing? When do you do shadow testing before the pilot date?**

Nicola Vosser-lead ePMA Pharmacist, Chelsea and Westminster Hospital (CWFT)

We joined onto the shared domain with Imperial and therefore the ePMA workflows were already in operation. All new builds by the Chelsea ePMA team were tested / checked by the ePMA team as these were built. There were some elements of UAT during or after data migration / downtimes.

Pritesh Patel- Pharmacy Information Officer, Great Ormond Street Hospital (GOSH)

GOSH had continuous testing, I do not believe the testing for pharmacy was effective or comprehensive (apologies I was not involved in the main pharmacy side), however we only established a build sop, new drug request process and validation process after I started in my role (1 year post go live). These MUST be done during implementation!! I fully recommend getting build standards, processes, validation processes all put in place well before drug build. Testing was all very iterative and while there were official dress rehearsals, I think they were close to go live and I don't think the right people in the room to ensure effective.