

Homerton's outpatient services re-imagine clinical documentation.

Dragon Medical One secure cloud-based speech recognition is reducing transcription costs, speeding up clinical correspondence and freeing-up time to care.

Challenge

- Redesign outpatient services to deliver greater value
- Limited admin support
- Reduce clinic letter turnaround time

Solution

- DM One, PowerMic Mobile
- Nuance Professional Services and Customer Success Organisation

Results

- >£150,000 saved annually in outsourced transcription costs
- Costs of medical secretariat reduced by one third
- Turnaround times on target
- Improved patient experience

Background

Based in the East London Borough of Hackney, Homerton provides a wide range of health services in a hospital and community setting with staff working out of 75 different sites. The hospital has almost 500 beds spread across 11 wards, a nine bed intensive care unit and maternity, paediatric and neonatal wards.



**Homerton
University Hospital**
NHS Foundation Trust

Homerton is deeply embedded in its local community and is recognised as an innovator in embracing methods and systems that promise better and safer patient care. It is continuing to pursue that reputation with its ongoing program of investing and adopting digital technologies that enhance its services and the way it delivers them to its community. 'Achieving Together' is the blueprint for how Homerton will deliver new services up to 2020 and realise its mission of 'Safe, compassionate, effective care provided to our communities with a transparent, open approach.' It is the context within which a series of transformation initiatives across the Trust are being delivered.

Re-imagining outpatient services

Two initiatives have been focused on how the Trust organises and delivers administrative support and outpatient services.

Clinicians in outpatients were still creating handwritten notes and using their medical secretaries to type and edit. As the workload of clinics increased, worklists were getting longer and backlogs were building up. Clinicians were staying late at work to catch up on admin. Outpatients were also experiencing slow clinic letter turnaround times of 17 working days despite large outsourced transcription costs. Working within tight budget controls, the option to recruit more medical secretaries or contract in temporary administrators was not an option.

Investments in new technology have enabled the transformation team, working closely with clinicians and medical secretaries to re-visit outpatient workflows and processes. Together they have re-designed them for long-term efficiency and to free-up precious administration resources and to refocus them on patient-centred activities.

The team implemented Nuance Dragon Medical One speech recognition which was integrated into the Cerner Millennium electronic patient record (EPR). Clinicians now use their voice to capture the patient consultation more naturally, efficiently and on their own terms.

Led by clinicians

The transformation team brought their experience and success in introducing technology elsewhere at Homerton to create an efficient, paper-light service. They engaged early to identify enthusiastic clinicians and medical secretaries who would champion the change. The project was led by clinicians and their teams with all of them having opportunity at every stage to input to the process. Clinicians, their medical secretaries and operations colleagues re-imagined the entire outpatient clinic process and the clinical documentation flow that accompanies it. Together

they re-designed their ideal workflows focused on the desired communication with patients, GPs and other colleagues.

Making the change

Having designed the ideal workflow, the team started rolling the technology out. Understanding the time pressured, high-throughput environment of outpatient clinics it was clear that formal classroom training just wasn't going to work. Clinicians and secretaries could not free up half days to work through workflows, templates, macros etc. Instead, Nuance Professional Services and Homerton's in-house training team offered a one-hour introductory course. This included the basics of using speech recognition with the EPR and the creation of a few key templates and macros. Once back in the outpatient clinic and in the 4-5 weeks post-implementation of the Dragon Medical One software, floor-walkers and 'super-user' clinicians and medical secretaries provided peer to peer support and 'on-the-job' training in the use of standard templates and macros. This further sped-up and smoothed the workflows.

The team were supported by Nuance Professional Services throughout the scoping, design, workflow mapping and implementation of the project. Once deployed, the day-to-day monitoring of key performance targets such as the continued uptake of speech recognition by users, optimisation of the use of standardised outpatient templates and macros etc are carried out by Nuance Customer Success Organisation (CSO). Reporting on a weekly then monthly basis as the operation settles into the day-to-day, the CSO also highlights early and up-front any user training or support issues. Working closely with the Homerton transformation team this approach enables speedy remediation and avoids any interruption to services and supports clinician usability and satisfaction.

A complete turnaround

In terms of hard targets and cost savings, turnaround time of clinic letters has reduced from 17 days to just 2. This is well within CCG targets. The trust is also saving in excess of £150,000 a year on outsourced transcription costs. Staff costs too have been reduced. Medical secretaries who have left are not replaced and bank and agency costs have been reduced culminating in a one third reduction in spend on the medical secretariat.

The softer benefits are just as impressive. Now, during outpatient clinics, clinicians are entering their own notes into the electronic patient record at the point of care and creating clinic letters they can give to their patients and send electronically to the GP before the patient leaves the clinic. Patients benefit from faster, personalised communication and there are few lost or

Why clinical speech recognition in the cloud?

Paul Adams, Head of Clinical Information Systems explains why Homerton have opted for an opted for a managed software service solution delivered via secure cloud rather than one which the Homerton team runs from their own data centre.

We've invested in the latest proven technology. The Dragon Medical One speech recognition engine, utilising artificial intelligence, is super fast and accurate making life for our clinicians easier. We had questions about patient data privacy and security and 24x7 availability of the application for our clinicians for software delivered from a hosted cloud. Once these questions had been answered, a cloud solution enabled the Homerton to focus on delivering new work flows and continuous improvement for users rather than the day to day operation of the software.

Dragon Medical One directly integrated into the EPR system supports our paper-lite and transformation strategies. The roll-out of Dragon Medical One to our

clinicians is quick and simple and limited only to the speed at which we can introduce clinicians and their teams to the new ways of paperless working. Because Dragon Medical One is delivered via the cloud it offers much more flexibility. The voice profile for each user follows them wherever they work using any desktop or laptop PC. This means that we do not need to worry about any changes we want to make to the location of our clinicians and services.

We've seen considerable month on month cost savings as we replace our transcription services with real-time speech recognition. We have also saved expenditure by not having to invest in additional hardware or recruit scarce and expensive technical resources to run the software day to day.

We want to ensure that our investment is for the long term and remains current. Via the cloud we will get continuous updates and our clinicians will have instant access to and can take advantage of new features and enhancements as soon as they are released."

missed appointments. Medical secretaries can now focus on patient contact rather than having to try to get on top of typing a backlog of handwritten notes. The clinicians themselves benefit from knowing they are providing a better level of care to patients and no longer have to spend extra time after clinics catching up on paperwork.

In their own words

The transformation team have been posting blogs from those experiencing the transformation to keep everyone at Homerton up to date with the progress of outpatient projects. The following are a few extracts from the blogs as the outpatient transformation has progressed.

Dr Rob Fearn, Gastroenterologist

"Clinic by clinic we're stopping the use of paper outcomes and making notes straight into EPR. The new worklist is a great way to keep track of pooled clinics and who's been seen by whom. Dragon Medical's speech recognition is quick and accurate, but you do have to check for minor errors! In Gastro we are planning to use autotext templates for consistency across our multidisciplinary clinics. There are real benefits for the patient. Their medical history, scans and docs are in one place and I can print the patient's letter while I am with them. The patient leaves their

appointment with the letter – saving time reducing the risk of the letter going missing in the post.

"I've been really encouraged by how this has been received and how enthusiastic my colleagues are to make use of the changes we've made. There's an assumption that enthusiasm about technology is a young versus old thing. I've been struck by how often that isn't the case and it's much more about habits and how we get used to doing things in a particular way. Change always causes some anxiety, but that isn't a reason not to make the changes. The way to make it work is to really understand the problem that the change is trying to solve. By bringing together clinicians, admin staff and operational management from the Trust I think we've been able to do that well."

Piero Reynolds, Consultant, Rheumatology

"I am really keen on dragon speech recognition. The quality has moved on since I first tried it about 7 years ago. A really exiting change is being able to give the patient a copy of their clinic letter straight from the clinic. I'm constantly frustrated by a letter not being received which had delayed treatment. The patient has to return to the hospital for another appointment and there is so much duplication. I could envisage huge efficiency gains and lots more satisfied patients."

Dr Robyn Carter-Wale, Podiatrist

“There were issues with the previous workflow. No-one else could check a letter for you. I would keep my own log so that I would know what letter was completed and when. The patient letter did not go out until I had spent time after clinic doing hours of admin. I would finish clinic with a stack of handwritten notes and need to check them off on the system. There would be a backlog for medical records.

“Now, with Dragon Medical speech recognition, I can check while I’m dictating, I can see when it was done and if necessary why it did not go out. Now there are no more duplication of notes. I no longer need to spend quite so much time checking admin. A real highlight is the auto-text, it can auto-text and load a standard text which reduces risks and there is an auto-text list of treatment plans that it is helpful.

“With Dragon Medical speech recognition the set of notes are done. It has 3 or 4 purposes. The EPR is much easier to look at. You see the history of the patients in a drop-down menu including any longterm conditions and I can view specific records. It will standardise the way of using the EPR across the Homerton. It will over time improve departmental working.

“I am delighted; it has had a significant impact on my clinical time and work-life balance. The Homerton really are light years ahead of neighboring hospitals and this should be celebrated.”

Moira McLaughlin, Medical Secretary, Outpatients

“I have worked at Homerton for 16 years in different secretarial roles. Our service was the first service to have the speech recognition roll out and I have been involved from the start. Each project roll out in each service is different. It is not one size fits all. A single patient can often go to a number of different services. I want to ensure that the patient has the best experience possible.

“There was a concern ‘could we do it?’ as it felt like a big change in the way of working. Secretaries thought they would lose their job or be downgraded. That has not happened. The flow is dependent on doctors doing the letters on time. Everyone is taking part in the work plan. It is a lot smoother now.

“Speech recognition has replaced the typing we used to do. I check the unit and ensure the work flow is ready for the patient and send the doctor the preparatory notes. Afterwards I check that the patient flow is on track and letters are being done on time. My role has just diversified; there are now 2 secretaries to 12 Doctors and specialist nurses. Some secretaries have left and not needed to be replaced.

“A number of patients have said how much better their care is. A letter goes to the GP and the patient. Patients have said that they get the letter and the appointment more quickly than before.”

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