

Improving patient choice: Revolutionising referrals with end-to-end digitisation



To provide improved patient choice and experience, Circle Integrated Care (CIC) created an end-to-end referrals process – combining eForms and robotic process automation (RPA) to dramatically reduce administrative delays.

The Challenge

As a leading healthcare provider, CIC handles over 100,000 patient referrals every year. Originally, CIC's administrative teams could only action these during the working day, which caused processing times of up to twelve hours. The process was a manual and time-consuming procedure, taking around 35 minutes per referral – 10 minutes per referral download and registration before passing to triage, with a further 25 minutes of work to complete the full onward transfer to a chosen provider.

The Solution

In order to provide enhanced patient choice and experience, CIC implemented an end-to-end process, combining RPA and eForms to deliver fully autonomous eReferrals.

New to RPA, CIC decided to deliver this project as part of an NDL Mentorship Scheme – taking its in-house developer from foundation to practitioner level, while guiding delivery best practices, methodology and replicability. The resulting process is as follows:

- Once a GP referral is submitted, RPA bots receive, register, and deliver to triaging clinicians in 3 minutes. The KPI completion deadline for this process is 24 hours – putting 23 hours and 57 minutes back in the hands of clinicians, where administration previously consumed 75% of that time.
- Clinicians use integrated and responsive NDL Digitise eForms within CIC's existing electronic patient record (EPR) to inform their decisions.

Key Benefits

Enhanced patient choice & experience

Improved data accuracy

Time savings equivalent to 2 FTEs

Live provider capacity data

Automation has truly been transformational to our ability to deliver quick and easy access to great care. Our staff now turn up safe in the knowledge that all referrals have already been processed, enabling them to focus on more rewarding patient facing activities.



Daniel Smith
Head of Operations





- Bots record the original referral method, as well as documents required for specific referral packs. A unique identifier is generated for the referral within the patient record - sending a SMS message to confirm the triage and referral decision.
- Bots then create a unique URL link, allowing patients to select their preferred community provider (sorted by distance and service capacity) through another integrated eForm. No further information is required from the patient as responses are linked with CIC's EPR.
- The eForm shows only available providers with indicated capacity. When a patient responds, bots then start to build the referral pack and covering letter according to each provider's unique preferences and requirements.
- Bots then send the completed referral pack via the provider's preferred communication channel - whether it be via eRS, post or email. Confirmation letters are also sent to patients. This process takes around 5 minutes.
- Once a patient has finished their care episode, they then complete one of two eForms - discharge or request for review. Further RPA processes are triggered to receive and process these documents as required. If a patient is discharged, bots will upload the discharge document into CIC's EPR, updating the patient file with an automatically generated summary letter, before sending it to the patient and their GP.

The Benefits

The project has been revolutionary within CIC, first launched within physiotherapy but soon to be applied to all pathways. It provides a wide range of benefits including:

Patient choice: Patients can make quick and informed decisions via digital channels

Data accuracy: All referrals are now processed with zero errors

Response rates: 77% response rate to SMS patient choice eForms, of which around 90% are received back in under 5 minutes

Time savings: CIC's referral process now takes 12 minutes without human intervention - a time saving of over 5,476 working days per year

Reporting insights: Full transaction reporting can be generated to compare with administrative processing

Script replicability: New end-to-end pathways are adapted, tested and launched at CIC within just two days

Knowledge & skills: Training and mentorship learnings gained provide technical ability for future innovations



By engaging with the workforce rather than simply focusing on the technology, I am developing automations that are actually solving real challenges.



Kelvin Wong
Lead Robotic Process Automation Developer



What's Next?

Following the project's success, this replicable end-to-end referral process is currently being applied to all other pathways within the organisation. With the process demonstrating the clear power of end-to-end digitisation, the wider Circle Health Group plans to deliver these benefits across its network of 52 hospitals nationwide.

