Improving access to Early Intervention in Psychosis (EIP): the 2-week wait for cancer comes to psychosis

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ABSTRACT

Early Intervention in Psychosis (EIP) services aim to rapidly initiate specialist packages of care for those people newly experiencing symptoms. The intention of such rapid engagement is to mitigate the negative effects of a prolonged duration of untreated psychosis. Aiming to achieve a ‘parity of esteem’ between mental and physical health, a new target was introduced by the National Health Service (NHS) England, where 50% of new referrals were expected to receive a concordant package of care within 2 weeks from the National Institute for Health and Care Excellence. A baseline assessment in late 2014 found that just 21% of all referrals received and accepted met this target within the EIP Team for the North-East London NHS Foundation Trust. This project sought to improve the team’s performance, seeking input from all team members and using an iterative process with the primary aim of improving access to the first episode of psychosis rapidly. Interventions were therefore designed targeting three domains of improving staff awareness of the new target, improving efficiency by changing the case allocation process and improving the referral pathway for external sources. The impact of these changes was re-evaluated over two cycles beyond baseline. By the final cycle, 62% of new referrals were seen within 2 weeks, while inappropriate referrals declined to just 3%. The multi-interventional nature of this project limits its generalisability and further work should be carried out to identify those changes that were most impactful. Nevertheless, focused targeting of the referral pathway may prove to be of benefit to other EIP services struggling with lengthy wait times.

PROBLEM

People with psychosis experience a wide variety of symptoms distorting their perception of reality, which may be debilitating and result in a long-term disability. Early Intervention in Psychosis (EIP) Teams aim to rapidly assess and provide specialist interventions to those experiencing psychotic symptoms for the first time in order to mitigate the poor long-term prognosis that is associated with a long duration of untreated psychosis (DUP).1 Recognising a historical disparity between provision of mental and physical health services,2 the National Health Service (NHS) England has introduced a 2-week referral-to-treatment (RTT) target for psychosis in England3 similar to targets already established for suspected new cancer cases.4 5 In 2015, the target was set as commencing a care package approved by the National Institute for Health and Care Excellence (NICE) within 2 weeks for 50% of new referrals of those experiencing a first episode of psychosis, steadily increasing to 95% by 2020.3 5 This introduced the concept of ‘clock starts’, that is, the point at psychosis is first recognised. If the referral originates from general practice, this is when the referral is first received at the entry point to mental health services. If originating from within mental health services, it is when psychosis is first recognised by the referring team.6 The ‘clock stops’ when a patient has been assessed as experiencing first-episode psychosis, has been allocated to a care coordinator and so has begun a NICE concordant package of care per NHS England guidance.7 The clock may also stop if they are not experiencing first-episode psychosis. To prepare for this new target, an audit of the EIP service provided within the North-East London NHS Foundation Trust at Thorpe Coombe Hospital was carried out between September and November 2014. This service receives referrals from a diverse number of sources including Accident and Emergency, Child and Adolescent Mental Health Services (CAMHS), Education, Probation Service, General Practice, Perinatal and others. Cases were then allocated to a care coordinator who would then arrange an initial meeting and assessment (see figure 1 for local First Episode Psychosis referral pathway). Baseline measurements of this process found that only 21% of accepted referrals were seen by a care coordinator within 2 weeks. Improvement was therefore clearly necessary, requiring analysis of the referral flow through
NELFT
Referral to Treatment (RTT)
Pathway for First Episode Psychosis (FEP)

Figure 1  Local referral-to-treatment pathway for those experiencing First Episode Psychosis based on National Health Service (NHS) England guidelines.7 ABIT, Access and Assessment and Brief Intervention; CPA, Care Programme Approach; EIP, Early Intervention in Psychosis; GP, general practitioner; HTT, home treatment team; NELFT, North-East London NHS Foundation Trust; TeamCCO, care co-ordinator.

this service, which had a total case load of approximately 250 users, spread across two teams covering separate boroughs within the Trust.

Given the variety of challenges facing a service encompassing multiple teams working within distinct geographical areas, a collaborative approach to service improvement was taken, seeking input from all team members. The primary aim of this project was to increase the percentage of new referrals seen within 2 weeks to be compliant with the new 50% standard ahead of its coming into effect. A baseline determination of demographics of new referrals (including sex, age and source of referral) would also be compiled over the project duration as no prior data for this particular service existed.

BACKGROUND
In England, incidence rates of non-organic psychosis (ie, those experiencing psychotic symptoms not stemming from conditions such as Alzheimer’s or dementia) have remained broadly stable, rising slightly from 0.4 per 100 to 0.7 between 2007 and 2014.8 While some of those newly experiencing psychosis find that their symptoms resolve fully with no further recurrence, most will have multiple episodes throughout their lifetime.9 This can be associated with early mortality10 and increased rates of suicide.11

It has been recognised that the long-term prognosis for those experiencing psychosis is linked to the DUP.1 Although the causal mechanism for this remains unclear,12 lengthier DUP is associated with a statistically significant increase in the severity of positive and negative symptoms, along with a lower chance of going into remission and overall poor symptom outcome.13 Accordingly, there has recently been a greater focus on EIP services which provide rapid access, early detection and specialised intervention for people with a first episode of psychosis.14 These services have been found to reduce a young person’s suicide risk from 15% to 1%15 and within London, EIP has been suggested to result in better maintenance of contact with health professionals and reduced hospital readmission rates.16 EIP services focus their management on those aged 14–35, as over 80% of those experiencing their first episode fall within this range17 where early intervention within the first few months can significantly enhance the prospects of recovery.18 19

While timely intervention is recognised as an important factor in outcomes, until recently, there have been no mandatory waiting times in mental health services
comparable to those seen in physical healthcare. This was part of an overall historical inequity between mental and physical health funding that the NHS England has only recently sought to resolve, achieving a ‘parity of esteem’ between the two domains. As a result, the aforementioned waiting time targets have been introduced, coming into effect by 1 April 2016. This models the introduction of targets established in 2000 under the NHS Cancer plan, including a 2-week referral to be seen standard, which resulted in significant improvements in survival. This commitment has been matched by increased investment of £120 million into mental health services between 2014 and 2016 with £33 million specifically earmarked for EIP and crisis care.

Achieving this target however is challenging, given the broad range of services that EIP Teams must engage and interact with, each with their own requirements and protocols. In the Thorpe Coombe EIP service, for example, ward referrals could be seen relatively rapidly while users were inpatients, whereas CAMHS required joint assessment with the guardian/parent and the referring team. In total, the Thorpe Coombe EIP service receives referrals from nine different organisations including ACCESS (Assessment and Brief Intervention), CAMHS, General Practice, Home Treatment Team, Ward Referrals, Psychiatric Liaison, Perinatal Parent Infant Mental Health Service and the Probation Service. The impact of this multiagency complexity was subsequently demonstrated by the poor baseline measurement finding, ultimately resulting in a longer DUP and potentially poorer outcomes for those experiencing first-episode psychosis.

Patients presenting with an at-risk mental state (ARMS), which is seen as a possible precursor to psychosis, were not included in the study. At that time, there was no provision for people with ARMS and no service commissioned.

**BASELINE MEASUREMENT**

Data were gathered regarding all consecutive referrals to the Thorpe Coombe EIP service over a 3-month period between September and November 2014. Of primary interest was the amount of time elapsed between a referral being accepted and the user being assessed and beginning work with an allocated care coordinator, equating to commencing a NICE concordant package of care. Information regarding demographic details, source of referral and appropriateness of referral was also collected.

In the baseline cycle, 29 referrals were received (M=23, F=6, average age 25). Of these 29 referrals, 66% were accepted (19 of 29) with just 21% of all new accepted referrals being seen within 2 weeks. The high number of inappropriate referrals (34%) was thought to cause significant delay as care coordinators reported having to spend time filtering these, alongside arranging care for those who had been accepted. While collecting the data, it was noted the source of referral correlated with those who were accepted to the case load. One hundred per cent of referrals made by a general practitioner (GP) were declined, 40% of those from ACCESS teams were declined and 30% from mental health inpatient services.

Given this, it was decided to continually evaluate referral to treat time alongside appropriateness of referral. Interventions would be deemed successful if they increased the percentage of referrals seen within 2 weeks, while decreasing the percentage of inappropriate referrals. Both these metrics would be broken down by referring service, to allow focused interventions to be deployed.

Interventions would be deployed over three monthly cycles, allowing for data to be compiled and further changes to be made ahead of the April 2016 roll-out of the 2-week RTT standard, should sufficient improvement not occur. This was also thought to be an appropriate length of time to accrue sufficient referrals to provide valid results. In determining our outcomes, reliability was considered to potentially be an issue due to the increased risk of non-attendance and non-engagement in this population group. Although NHS England guidance states that all efforts should be made to engage the patient in different settings including home, directly and via family, for the purposes of this quality improvement project, we sought to directly identify bottlenecks in our referral flow without this potentially confounding element. Therefore, although figures on those who did not attend (DNA’d)/engage with the service were also recorded, those who DNA’d were excluded from our final results. Data on time to be seen by a care coordinator would also be gathered continuously from referrals received in the baseline and the first intervention cycle, to determine if the interventions resulted in a decrease in average waiting times.

**DESIGN**

From the baseline data, two goals were established: to increase the number of referrals who started a NICE concordant package of care, and to reduce the number of inappropriate referrals. Given the highly complex nature of the EIP service, input was sought from all team members about where potential bottlenecks in referral flow were occurring. These meetings were spearheaded by the lead consultant for the service, with support from attached trainees and medical students (who also assisted in data gathering and analysis for this project).

Feedback from these meetings led to the development of three key domains of awareness, efficiency and education. It was then determined that all teams should be made aware of the standard, that internal processes in the trust and the team should be efficient, and that all Early Intervention Team members would be involved as educators about the standard. This would be achieved via presentations within the EIP Team, or attendance at prearranged workshops. Lack of awareness was thought to be a problem, especially due to high staff turnover within the service. Although the high turnover could also potentially negate the effect of such interventions, it was felt that as the 2-week RTT standard was to become common
practice across all of NHS England, lack of awareness would likely fall over time.

EIP user flow would also be made more efficient, with the on-call coordinator no longer allocating referrals to different coordinators but instead taking on all referrals made to them, giving them immediate knowledge of when the 2-week period would be due. This was thought to be a potentially significant driver of RTT time reduction as previously referrals may only have been finally allocated during once-weekly multidisciplinary team meetings.

Finally, plans were made to better educate referring teams about EIP’s remit, providing targeted training for each, prioritised on those services making greater numbers of inappropriate referrals. As the on-call care coordinator screens all referrals received, a reduction in inappropriate referrals would theoretically reduce the workload and allow them to spend more time on setting up packages of care for those who are eligible. Further input relating to all three domains would be sought throughout the process and interventions better tailored as part of an iterative design to enhance the efficacy of the changes.

STRATEGY AND IMPROVEMENT CYCLES
With an overall aim of having 50% of new referrals to be seen less than 2 weeks ahead of the NICE standard coming into effect, several measures were introduced, aligned with the three target domains of awareness, efficiency and education. It was determined that in order to achieve this target prior to the establishment of the standard, three monthly cohorts with an approximate number of 30 referrals per cycle would be continued as per the baseline assessment to allow for direct comparison. Should our planned interventions be ineffective initially then there would be an opportunity to adjust our approach prior to repeating the audit of the service.

In the first intervention cycle, presentations were given to all EIP Team members within Thorpe Coombe relating to the new standards being introduced. This was carried out by a GP trainee working within the team. The duties of the care coordinator were modified, with them now taking on all referrals they received while on call, with the intended benefit of immediately highlighting the 2-week target to the team member. Educational activities were also carried out for services generating high numbers of inappropriate referrals. A presentation about EIP services was made at a large GP network educational event, along with representatives being sent from the EIP Team to other referring organisations such as ACCESS.

Following this, 41% of accepted referrals seen within the 3-month period now met the 2-week RTT target. While there was improvement on prior performance, this was still short of the primary aim. Discussions were made with both team members and referring organisations to identify further bottlenecks and improve on the previous intervention design per the iterative process.

Key learning points included that referrers found the pathway to EIP to not always be clear, describing the referral form as unnecessarily complicated, leading to incomplete completion. This would result in referrals being declined as key information to determine eligibility was missing. Within the EIP Team, discussions revealed that while coordinators would immediately take on referrals made to them, this could lead to a high degree of variability in workload, especially when planned leave for said coordinator was factored in.

Using this feedback, changes were made to the second intervention cycle, in both the referral pathway from external sources and the allocation of referrals. EIP staff worked to simplify and shorten the referral form, adding a brief checklist to aid referrers to determine appropriacy. A team whiteboard was also set up to track and signpost all accepted referrals that had not been seen, along with a countdown of days to breach of the 2-week RTT target. This would allow for those referrals at risk of not being seen in time to be prioritised, as well as identifying cases that would be at risk of breaching (eg, if care coordinators were absent on leave or due to illness). These further modifications resulted in 62% of accepted referrals being seen within 2 weeks.

SUMMARY OF RESULTS
Over the baseline and two intervention cycles, a total of 92 (mean of 30.7 per cycle) referrals were received (M=64, F=28) with an average age of 24 years old. With respect to the main outcome measure of accepted referrals being seen within 2 weeks, this increased from a baseline of 21% (n=4) to 41% (n=12) by intervention cycle 1 and 62% (n=18) in cycle 2. Rates of service users who DNA’d appointments or engage with care coordinators remained low throughout the audit (n=7, 8% of total referrals, average of 2.3 per cycle (range of 0–4)). Removing those who DNA’d to review the effect on referral flow through the service, these percentages increased from a baseline of 25% to 72% by the end of cycle 2.

Appropriateness of referral also showed marked improvement. The percentage of inappropriate referrals declined from 34% (n=10) in the baseline measurement to 12% (n=4) in cycle 1 and just 3% (n=1) in cycle 2. The number of days for patients to be seen was also analysed and plotted as a run chart, comparing baseline with the first intervention cycle (n=51, see figure 2). This analysis found a statistically relevant reduction in waiting times from 32.4 to 14.11 days. Of note, the run chart demonstrates that following the intervention, the upper and lower control limits narrowed, suggesting that the range of variability in waiting times was also reduced (the sole exception being a user who failed to attend multiple times).

LESSONS AND LIMITATIONS
The primary aim of this project was to increase the speed of which referrals were processed through the EIP service to meet the incoming NICE RTT standard. In this regard,
the data show great strides have been made, with a near threefold increase in those being seen within 2 weeks, from 21% of all new accepted referrals being seen to 62% by the end of cycle 2. This change has been achieved despite EIP services across London forming part of a highly complex network with many moving pieces. By necessity, this project relied heavily on multidisciplinary communication to make this happen, with input from all members being used to build the interventions deployed throughout. Targeted focusing of services generating inappropriate referrals also was highly successful, with the number of declined referrals falling from 34% in the baseline measurement to just 3% by the final cycle, an 11-fold decrease. By both restructuring EIP’s own referral pathway and communicating with other teams, 97% of referrals made to EIP are now appropriate, with the majority being seen in under 2 weeks. This is likely to improve user experience for both those who are accepted and those who are declined who will now be more likely to be directed to the correct team more rapidly. This kind of cross-service collaboration and discussion will be key going forward as the target steadily ramps up to expecting 95% of referrals to be seen within 2 weeks by 2020.

However, while improvements within the service were clearly made, using multiple interventions makes it difficult to identify which change was effective and which was less so. Given the need to make improvements to the service rapidly ahead of the roll-out of the 2-week RTT standard, it was not feasible to test one change per cycle while accruing enough referrals to analyse the data. It may be that a significant degree of effort was expended on interventions that were less fruitful in producing change. The intervention of making EIP Team members aware about the incoming target proved particularly challenging given the high degree of staff turnover, which somewhat negated the sustained effect of such learning within the organisation. The iterative design of this audit also meant that the staff who had input into interventions often then played a role in implementing them, acting as a possible confounder.

Referral numbers were relatively low per cycle (mean=30.7), which meant that the data could be easily skewed. Although the data for the 2-week wait were analysed excluding those who DNA’d, this did not fully exclude extremes due to poor compliance, as seen in intervention cycle 1 where one user went through multiple episodes of failing to attend appointments before engaging. The data also showed a clear demographic skew, with 64 of new referrals being male and 28 being female (M:F=1:0.44). While it is thought that first-episode psychosis has a lower incidence rate in women compared with men, especially between the ages of 18 and 25,26 the data may have over-represented men given that other meta-analyses have only found an incidence risk ratio of men to women of 1.42 compared with the project’s ratio of 2.29.27 Further analysis based on demographic subgroups such as ethnicity or socioeconomic status would also be of use for future projects to identify if any groups are being seen in a less timely fashion.

While we cannot conclusively attribute the change to a certain intervention, the data did demonstrate a marked

![Figure 2](https://example.com/image.png)

**Figure 2** Statistical process control (SPC) chart showing the time between the date of referral and the first appointment with Thorpe Coombe Hospital EIP. DNA’d, did not attend; EIP, Early Intervention in Psychosis.
increase in referrals seen in less than 2 weeks alongside a marked decrease in inappropriate referrals. Despite the significant confounder of EIP staff involvement in design of interventions, this is unlikely to have played a role in changing appropriacy of referrals from external sources. An inference from the data can then be drawn that one of the most significant barriers to delays in RTT times originated from a complex and poorly understood referral process that became significantly more efficient with targeted changes. Now that the referral process has been sufficiently improved to meet the target, future cycles should aim to evaluate which of the interventions have the greatest impact and which may not be of as much benefit, as well as aiming to remove the confounding element by testing changes relating to care coordinator assignment and EIP Team awareness of the 2-week RTT in a different London EIP service.

CONCLUSIONS

By deploying the interventions developed from identifying bottlenecks in user flow through the EIP service, significant improvements in the percentage of referrals seen within 2 weeks were achieved. For those experiencing symptoms of psychosis for the first time, this will result in a shorter duration without treatment and ultimately a lower risk of experiencing DUP’s harmful sequelae.

While improvement has been made, the multi-interventional nature of this project means that it is challenging to identify any single process change that accounted for the outcome. However, the accompanying fall in inappropriate referrals suggests that EIP services may benefit from focused re-evaluation of their referral pathways. As referrals are received from multiple external sources and that EIP itself is a relatively modern paradigm in mental health services, these pathways can easily become complex and may be poorly understood. This can result in a high number of inappropriate referrals, whose processing can cause delays in deploying care packages for those who are eligible.

Improvements here will also likely result in users not eligible for EIP being directed to the appropriate service more quickly. Nevertheless, further work should be carried out to identify which deployed intervention resulted in the greatest effect, not just locally but also in other London EIP services to see if the results can be replicated without any confounding influence.

There is however an issue of sustainability. It is often easier to meet a new target when motivation is high around the introduction of new targets. Over time, this may subside and given the added volume of work the time devoted to it may reduce. Our impression is that despite widespread awareness developing alongside the introduction of the new standard, the promotional work to other teams will need to be repeated over time to ensure that referrals are made when psychosis is first suspected. The nature of the educational approach may need to change over time towards a briefer ‘refresher’.

Although this project has resulted in the Thorpe Coombe EIP service meeting the primary aim of reaching the government standard of 50% of new referrals being seen within 2 weeks, this is merely an introductory target which will progressively increase to 95% by 2020. To ensure that the team will meet this goal of seeing nearly all referrals for people newly experiencing psychosis within 2 weeks, ongoing studying of the referral process, refinement and reauditing is planned.

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Contributors

KS reviewed the data gathered throughout the process, cleaned and analysed the data, and redrafted the submitted the manuscript. KS is the guarantor of the study. FG initiated the collaborative project, gathered data and drafted the initial manuscript. RW gathered data and performed initial data analysis. BSA performed data analysis. PC provided project oversight, gained statistical input and revised the draft paper.

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