

Key Messages

- The amounts of time between assessment and start date were analysed to explore the relationship with completion rates and mental health outcomes.
 - **A statistically significant relationship was found between completion rates and time between sentence and start date ($t=-2.903$ $p=.004$) with reduced delays being associated with higher completion rates;**
 - A moderately statistical relationship was found between global distress and the amount of time between sentence and start date ($t=2.153$, $p=.032$), where longer waiting times were associated with lower mental health outcomes.
- The preliminary evidence **demonstrates that the time between sentence and start date has a significant impact on completion rates and minimising this time should be a focus to increase completion rates.**
- CORE-34 outcomes were also identified to be influenced by the time between sentence and start date of intervention, where **a sharper reduction in mental health outcomes is encountered for those with a waiting time between sentence and start of intervention longer than 8 weeks.**
- Based on this data, it is argued that to limit the negative effects of delays individuals should start the intervention within 8 weeks after being sentenced.

What is the problem?

There is currently little information on the impact of delays between assessment and sentence for primary care MHTRs on outcomes. This policy brief provides an analysis of the impacts of the time between assessment and start date of intervention with completion rates and mental health outcomes. In so doing, a better understanding of the factors that maximise the intervention's benefits is provided to guide practice and inform policy.

Introduction

There is a growing academic concern that delays within mental health systems may lead to poorer health outcomes in treatment receivers¹. Among others, Williams *et al.* identify timely access to mental health services as a critical factor to a successful treatment². Additionally, Koopmanschap *et al.* show evidence of the long-term impact of waiting times on mental health where the deterioration of the patient's condition while waiting may lead to a longer recovery or, beyond a critical point, no recovery at all³. In extreme cases, a study by the Royal College of Psychiatrists has found that two fifths of patients waiting for mental health treatment contact crisis services or emergency with 11% ending up in A&E⁴. Of the 89% of individuals from the study that stated that their mental health had deteriorated due to waiting times, 33% claimed it had affected relationships, 30% that it had led to financial troubles and 18% that it had caused work problems including job losses. Therefore, waiting times do not only have an impact on the likelihood and extent of mental health outcomes, but it also impacts on service user's lives while they are not receiving the treatment.

The purpose of this Policy Brief is to explore the impact of delays to begin intervention on health outcomes for individuals who engage with a mental health intervention as part of a MHTR. It provides a layered analysis of the gap between assessment and start date and how this may affect both completion rates and mental health outcomes. In parallel with the antecedent policy brief, data were provided from the national multi-site evaluation being completed by the Institute for Public Safety, Crime and Justice, based at the University of Northampton.

About the Evaluation

The evaluation began formally on August 1st 2020. There are currently 14 sites involved in the evaluation. The evaluation has been reviewed by the University of Northampton Research Ethics Committee, the National Health Research Authority and the National Research Committee. Each site receives a bespoke report every 6 months throughout the project.



Exploring the Influence of Process on Health Outcomes and Engagement

The following analysis explore how the processes in terms of time of assessment, sentencing and starting intervention as part of an MHTR may impact on overall health outcomes and engagement. The analysis will consider different variations within the MHTR pathway including waiting times between sentence and start date as well as dual sentences and length of intervention. Data were collected for those assessed for MHTR after July 2020 and before August 2022 by the Assistant Psychologists in each site as part of practice. The aim is to shed light on aspects of the MHTR process that have the potential to maximise benefits for service users.

Gap between assessment and start date

Analysing the programme’s time frames can shed light on different levels of engagement. On average 24% of individuals who had an MHTR start of intervention date did not complete it. Understanding the factors that impact non-completion rates could be beneficial to increase engagement and maximise health benefits.

Analytical Approach

In total, there were 2,301 cases provided in the dataset for MHTR where service users had been assessed, of these 1,201 were sentenced to an MHTR. For the purpose of this analysis, dual orders were removed from the analysed data due to differences in the pathway for these individuals. Among the remaining individuals, 427 (65%) had completed the programme and 230 (35%) had not. Of the non-completers, however, 31 (13%) had what could be interpreted as more ‘acceptable’ reasons for not completing the programme. These include moving out of area, physical health (e.g. Pregnancy) and quashing of sentences by the Court. Excluding these individuals lowers the number of non-completers to 32% (199). An analysis between this cohort and that of treatment completers is used to shed light on aspects of the programme that impact completion rates. The difference in sample sizes was considered throughout the analysis.

Fig. 1 Mean number of days between assessment and start date (Grey = 80% of cohort)

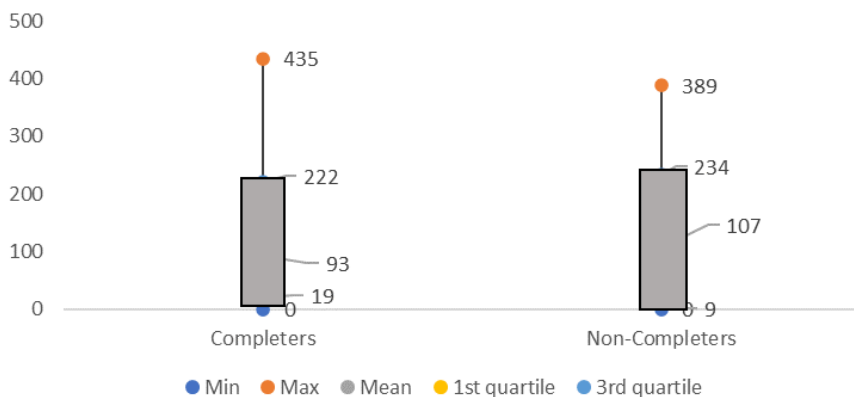


Figure 1 – the mean number of days between assessment and start date for treatment completers and non-completers

Figure 1 shows the mean number of days between assessment and start date for treatment completers and non-completers. The graph provides evidence that the mean number of days is higher for treatment non-completers (on average 107 days) compared to treatment completers (on average 93 days), suggesting the period of time between assessment and start date might affect likelihood of completing the intervention. The grey boxes in the graph encompass 80% of the sample to account for outliers. Although only a moderate significance was found between completion and days between assessment and start date ($t=-2.043$ $p=.041$) it would be prudent to re-evaluate this relationship on a greater and more equal sample size.

Looking at processing times in closer depth, the pathway can be further subdivided into length of time between assessment and sentence, more dependent on the courts, and length of time between sentence and start date, more dependent on the service providers.

Here we find that lengths of time between assessment and sentences tend to be more consistent over time with a similar number of days for completers ($M= 26$ days, $N=400$) and non-completers ($M= 23$ days, $N=175$). The relationship between completion and this time gap being non-significant ($t=.723$ $p=.470$).

However, time between sentence and start date seem to have a more sizable difference (Figure 2) when comparing the completer (M=73, N=405) and non-completer (M=97, N=120) cohorts. **The difference accounts for over 3 weeks additional delay with regression was found to be statistically significant (t=-2.903 p=.004).** This means on average, individuals who completed the MHTR treatment waited 73 days between sentence and start date whereas treatment non-completers waited 97 days.

Fig. 2 Mean number of days between sentence and start date (Grey = 80% of cohort)

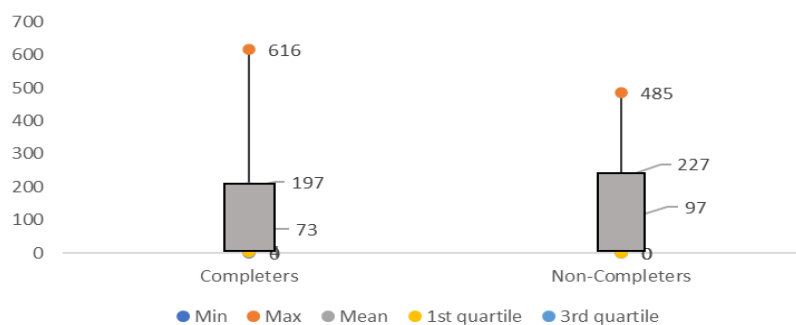


Figure 2 - the mean number of days between sentence and start date for treatment completers and non-completers

Overall, this analysis demonstrates that the time between sentence and start date has a significant impact on completion rates and should therefore be an area of focus to increase completion rates.

Impact of delays between sentence and start of intervention on treatment completers

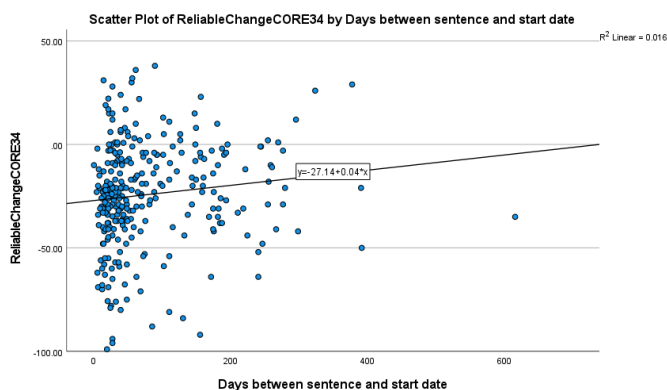


Figure 3 – the reliable change in global distress by the number of days between sentence and intervention start date

In addition to having an impact on completion rates, waiting times between sentence and start date could also have an impact on mental health outcomes. As shown in Figure 3 there seems to be a correlation between the days between sentence and start date and the mental health outcome in terms of CORE-34 change. **Here, as the number of days increases, the change in CORE-34 decreases, indicating smaller reductions in general mental health distress.**

Furthermore, the relationship between change in psychological distress and days between sentence and start date is found to be of a moderate statistical significance (t=2.153, p=.032). Although the correlation coefficient is

not sizable ($\beta=.04$) the direction of the relationship supports the thesis that waiting times do impact on mental health outcomes and should therefore be an area of consideration for improvements around the MHTR programme.

Subdividing the waiting time into months the difference in CORE-34 reduction is clear with diminishing returns the longer the waiting time.

As further explored in Figure 4, subdivided in fortnights, CORE-34 outcomes are sensitive to delays post sentence with a sharper reduction in mental health outcomes observed for those with a waiting time between sentence and start of intervention longer than 8 weeks.

Days between sentence and start date	N	Mean reduction in CORE-34
1 month	88	-30.3684
2 months	80	-21.6605
3 months or more	100	-19.74

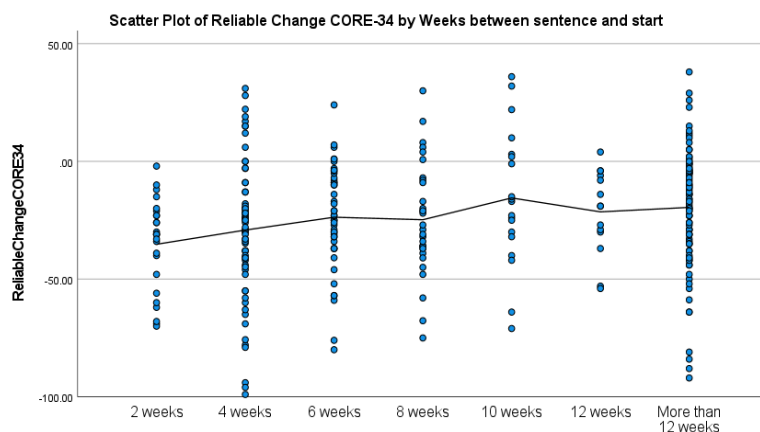


Figure 4 – The reliable change in global distress by the number of weeks between sentence and intervention start date.

Discussion and Implications

Overall, the analysis demonstrates how delays between sentence date and start of intervention negatively affect completion rates and the size of intervention benefit. It should be noted, however, that this data does not take into consideration the difference in frequency of contact during waiting time customary in different sites. **Contact made during this time could alleviate these adverse effects as shown in a few studies.** Chu *et al.*, for example, conducted a study on experiences of waiting time and found that the uncertainty of the length of delays was a significant source of anxiety. In this vein, transparent communication with services users and an acknowledgement of the waiting time was found to be beneficial. Additionally, providing information relevant to alternative sources of support was also deemed useful.

Nonetheless, the available evidence shows a sharper reduction in health outcomes was identified between 8 to 10 weeks following sentence. Therefore, based on this data, it is recommended that:

Sites aim to initiate intervention as soon as possible following sentence and where possible within 8 weeks following sentence to both improve completion rates as well as health outcomes following intervention.



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References: ¹Reichert, A., & Jacobs, R. (2018). The impact of waiting time on patient outcomes: Evidence from early intervention in psychosis services in England. *Health economics*, 27(11), 1772–1787. ²Williams, Marian & Latta, James & Conversano, Persila. (2008). Eliminating The Wait For Mental Health Services. *The journal of behavioral health services & research*. 35. 107-14. 10.1007/s11414-007-9091-1. ³Koopmanschap, M. A. , Brouwer, W. B. F. , Hakkaart-van Roijen, L. , & van Exel, N. J. A. (2005). Influence of waiting time on cost-effectiveness. *Social Science & Medicine*, 60(11), 2501–2504. ⁴Royal College of Psychiatrists. (2020). Two-fifths of patients waiting for mental health treatment forced to resort to emergency or crisis services. ⁵Chu, H., Westbrook, R. A., Njue-Marendes, S., Giordano, T. P., & Dang, B. N. (2019). The psychology of the wait time experience—what clinics can do to manage the waiting experience for patients: a longitudinal, qualitative study. *BMC health services research*, 19(1), 1-10.