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The impact of the NSW Youth Koori Court on sentencing and re-offending outcomes

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AIM To investigate the impact of the NSW Youth Koori Court (YKC) on youth justice outcomes, including the probability of being sentenced to a juvenile control order (JCO) and recidivism.

METHOD Youth justice outcomes for Aboriginal young people referred to YKC ($n = 151$) were compared with outcomes for Aboriginal young people who had their matter finalised in a specialist NSW Children's Court (CC) through the usual court process ($n = 2,883$). Two estimation strategies were used in this study to compare outcomes. The first was a regression model that included an extensive range of control variables, such as demographics, offence types and prior offending history. The second was a difference-in-differences (DiD) model that measured changes in youth justice outcomes at Parramatta CC after the establishment of the YKC in February 2015.

RESULTS Aboriginal young people referred to the YKC were substantially less likely to be sentenced to a JCO. The estimates from both the regression and DiD models were similar: the main regression specification indicated that YKC participants were 5.9 percentage points less likely to be sentenced to a JCO. This is equivalent to a 40% reduction in the probability of being sentenced to a JCO. The DiD estimate indicated an 8.1 percentage point reduction. Among those not sentenced to a JCO, YKC participants were 7.6 percentage points less likely to be sentenced to a JCO at re-conviction within 12 months of index court finalisation. Each of these reductions were statistically significant. Furthermore, there were statistically significant reductions in sentencing and recidivism outcomes among young people with no prior custodial episodes and those charged with at least one violent or property offence at index court finalisation.

CONCLUSION There is an association between the NSW YKC and the diversion of young Aboriginal people from custody, without any apparent adverse impact on recidivism. However, we cannot be confident that these estimates are causal.

KEYWORDS

Evaluation

Aboriginal Australians

Young people

Sentencing

Recidivism/Re-offending

INTRODUCTION

Thirty years after the Royal Commission into Aboriginal deaths in custody (Commonwealth of Australia, 1991), Aboriginal over-representation in the criminal justice system persists. The high incarceration rate of Aboriginal young people is especially concerning. Despite recent decreases in the number of Aboriginal young people in custody in NSW (Donnelly, Ramsey, Poynton, & Fitzgerald, 2021), Aboriginal young people continue to comprise a significant proportion of the custodial population. As of December 2020, approximately 40% of all young people in youth detention centres in NSW were Aboriginal even though they represent just 5.3% of the youth population in this State (NSW Bureau of Crime Statistics and Research, 2020). Strategies for keeping young Aboriginal people out of remand and sentenced custody is therefore an urgent policy priority.

Indigenous sentencing courts are considered a potential avenue for reducing rates of imprisonment and recidivism of Aboriginal offenders. The first Indigenous sentencing court to operate in Australia was in South Australia in 1999 (Tomaino, 2004) and since then, several other jurisdictions have introduced similar models. Unlike traditional approaches to sentencing, Indigenous sentencing courts bring together the offender, respected members of the Aboriginal community, and representatives from the criminal justice system to discuss the offender's criminal behaviour in a non-adversarial environment. In some courts the offender's family and/or the victim(s) of the offence are also included in this process. These courts aim to address the needs of the community by encouraging an offender to take responsibility for their criminal behaviour. Elders and other Respected Persons are involved to provide cultural context and expertise to help the court better understand the underlying reasons for a person's offending and assist in determining the most appropriate penalty for the offence. Most Indigenous courts use elements of restorative justice and culturally appropriate practices to inform sentencing but some, such as Koori Courts, also aim to address a person's offending behaviour through court-monitored treatments and programs. Drawing on aspects of 'problem-solving' or 'problem-oriented' courts (Freiberg, 2001), Koori Courts defer sentencing for a period of time to enable the offender to access services and supports and demonstrate their potential for rehabilitation.

The Youth Koori Court (YKC) (Children's Court of New South Wales, 2015; Duncombe, 2015; Duncombe, 2018) adds to the array of court alternatives and diversion options operating in NSW. Two court models with similar aspects to the YKC have been trialled in NSW. The Drug Court of NSW was established in 1999 by the *Drug Court Act 1998* (NSW) and mainly operates by developing and monitoring a plan to address offenders' drug dependencies prior to sentencing. The continued effectiveness of the model in reducing offending has been demonstrated by several evaluations (Lind et al., 2002; Weatherburn et al., 2008; Weatherburn et al., 2020). The second, Circle Sentencing, does not involve any rehabilitation but includes the local Aboriginal community in the sentencing process. Typically, the presiding magistrate works with a group of Aboriginal elders, victims, respected members of the community, and the offender's family to determine the appropriate sentence. We elaborate on evaluations of this model further on in this report. Meanwhile, the *Young Offenders Act No. 54* (NSW) made several diversion options available to young people who come into contact with the criminal justice system in NSW. Specifically, young people can be given a warning (as opposed to being proceeded against in court) if they committed a non-violent summary offence. If the young person admits to the offence and consents, they may receive a caution or have their matter dealt with by way of a Youth Justice Conference.

The Youth Koori Court

In 2015, the YKC was launched in NSW. The YKC is intended for young Aboriginal¹ offenders and aims to (Children's Court of New South Wales, 2015):

- Increase Aboriginal and Torres Strait Islander community, including Aboriginal and Torres Strait Islander young peoples' confidence in the criminal justice system;
- Reduce the risk factors related to the re-offending of Aboriginal and Torres Strait Islander young people;
- Reduce the rate of non-appearances by young Aboriginal and Torres Strait Islander offenders in the court process;
- Reduce the rate of breaches of bail by Aboriginal and Torres Strait Islander young people; and
- Increase compliance with court orders by Aboriginal and Torres Strait Islander young people.

The YKC was established in response to the over-representation of Aboriginal young people in custody. It is an alternative case management process for Aboriginal young people charged with a criminal offence(s) who are appearing before the NSW Children's Court (CC) (Duncombe, 2015).² The YKC was initially set up at Parramatta CC in February 2015, and was expanded to Surry Hills CC (Duncombe, 2018) in February 2019.

For a young person to be eligible for referral to the YKC, they must satisfy the following criteria (Duncombe, 2015):

1. Bail for the offence has been granted or dispensed with;
2. The young person has indicated that they will plead guilty to the offence or had the offence proven after hearing;
3. Be descended from an Aboriginal person or Torres Strait Islander, identify as an Aboriginal person or Torres Strait Islander and must be accepted as such by the relevant community;
4. Be charged with an offence within the jurisdiction of the Children's Court that is to be determined summarily;
5. At a minimum, be highly likely to be sentenced to an order that would involve Juvenile Justice supervision with priority given to young people who are likely to receive a supervised probation order or a detention order;
6. Be 10 to 17 years of age at the time of the offence(s) and under 19 years of age when court proceedings commenced; and,
7. Be willing to participate.

Upon referral to the YKC, a panel assesses the young person's suitability based on the above criteria. This panel consists of nominated Aboriginal and Torres Strait Islander Elders or Respected Persons, the young person's legal representative and the police prosecutor. Other factors that are considered before acceptance into the YKC include the availability of suitable services in the residential area of the young person, the impact of the young person's participation on the victim or victim's family, whether the YKC has capacity to accept the young person into the program, and the availability of suitable Elders and Respected Persons (Duncombe, 2015).

¹ In this report we use the term Aboriginal to refer to Aboriginal people, Torres Strait Islanders and people who identify both as Aboriginal and Torres Strait Islander. Note that only a very small proportion of the Indigenous population in NSW are of Torres Strait Islander origin only (see <https://www.abs.gov.au/statistics/people/aboriginal-and-torres-strait-islander-peoples/estimates-aboriginal-and-torres-strait-islander-australians/latest-release#:~:text=Among%20the%20Aboriginal%20and%20Torres, and%20Torres%20Strait%20Islander%20origin>). We use the terms 'Indigenous' and 'Aboriginal and Torres Strait Islander' where original sources use these.

² In NSW, alternative sentencing initiatives have also been established for Aboriginal adult offenders. 'Circle Sentencing' is a restorative justice program for adult Aboriginal offenders and operates predominantly in regional NSW. For further information, please see Fitzgerald (2008) and Yeong and Moore (2020).

Once a young person is accepted, sentencing is deferred for up to 12 months to develop and implement a case management plan (referred to as an Action and Support plan) to address the underlying risk factors impacting on their involvement with the criminal justice system. A young person is assigned a casework co-ordinator and a YKC conference is established whereby the young person is encouraged to openly discuss their offending with Aboriginal Elders and other community members. Other conference participants include the young person's legal representative, family members, the caseworker and other support officers, and the magistrate. The conference takes place in a dedicated YKC courtroom and typically occurs within two weeks of acceptance into the program. In their review of the YKC pilot of Parramatta CC, Williams et al. (2018) describe the arrangement of the YKC courtroom, whereby participants are seated around an oval table and paintings by Aboriginal young people in custody are displayed. They describe the interactions as "...informal, participants speak in plain English not legalese, everyone gets a chance to have their say and there is a minimum of hierarchy" (p. 15), and that, "overall, the hearings were conducted in a respectful manner that took advantage of the team gathered around the table, provided affirmation to the young person and focused on the key issues facing the young person" (p. 17) (Williams et al., 2018).

The Action and Support plan is developed as part of this process. It is a relatively collaborative process and begins with all participants coming together to understand the factors leading to the young person's offending. Then participants, in consultation with the young person, identify suitable programs to reduce their risk of further offending. If the case management plan is approved, the young person will also participate in programs to address the underlying factors contributing to their offending behaviour, to reinforce cultural connections and knowledge, and to assist the young person in obtaining employment or further education, accommodation, health or other social services. Williams et al. (2018) reviewed Action and Support Plans for 33 young people and found that participants received support for a wide array of needs, including housing, education, employment, and personal health.

After a case management plan has been approved by the YKC, the young person is typically given three to six months to demonstrate their compliance with the Action and Support Plan prior to sentencing and progress is reviewed regularly (Duncombe, 2015). During this period, the casework co-ordinator assists the young person by linking them to relevant community services. At completion, a final report outlining the young person's progress and engagement with the YKC is submitted to the magistrate for their consideration before preparing the sentence. For young people who successfully complete the YKC, a culturally appropriate graduation ceremony is held to acknowledge their achievements.

Thus, the YKC differs from the standard CC process in several ways. First, young people who participate in the YKC typically have a longer duration between a proven outcome and sentencing than young people who proceed through the standard CC proceedings. Young people who are sentenced for summary matters via standard proceedings are typically sentenced on the day they are found guilty or plead guilty to an offence.³ Whilst awaiting sentencing, a young person in the YKC receives monitoring, conferencing, and treatment. This enables the court to gain an understanding of the circumstances which led to the young person's offending in greater detail than the standard Children's Court process. In the standard process, magistrates are only able to consider a young person's potential for rehabilitation, whereas in the YKC, a young person can demonstrate their progress towards rehabilitation prior to sentencing. However, the intensity of the services offered through the YKC means that only a limited number of Aboriginal young people can be referred to the YKC. We discuss this issue and its implications for this evaluation in the subsequent sections.

Prior research

Aspects of the YKC model, including restorative justice, culturally appropriate sentencing, and problem-solving courts have been studied extensively in criminal justice settings. While restorative justice initiatives are increasingly popular, the evidence for their effectiveness in reducing youth offending is mixed.

³ The median delay between plea/outcome and sentence in the Children's Court is zero days. The average is 13 days (source: unpublished BOCSAR data available from author on request).

Livingstone, Macdonald, and Carr (2013) reviewed four randomised controlled trials of restorative justice programs for young offenders and found no significant impact of the programs on re-offending or on a young person's sense of remorse, recognition of wrongdoing, self-perception, and satisfaction with the overall process. A later systematic review by Wong et al. (2016), examining 21 studies of youth restorative justice programs, identified a pooled odds ratio consistent with a reduction in recidivism. However, the authors noted that there was no evidence for significant treatment effects from the more rigorous studies reviewed. Similarly, Wilson, Olaghere, and Kimbrell (2017), who synthesised the results from 60 studies comparing restorative justice programs and practices with traditional juvenile court processing, found a moderate reduction in future offending behaviour but noted the results from the higher quality random assignment studies were smaller, raising concerns about the robustness of their overall result. Considering the effectiveness of different programs and practices, Wilson et al. also found greater impacts for victim-offender conferencing, family group conferencing, arbitration or mediation programs, and circle sentencing programs but smaller treatment effects amongst the more rigorous evaluations.

It is useful to note some differences between the YKC and restorative justice approaches when considering this evidence. Many restorative justice approaches are one-off events where outcome plans and sentences are determined jointly by the participants. In the YKC model, all participants work together at the initial conferencing stage to develop a greater understanding of the young person's criminogenic needs and identify potential pathways to address these. Sentencing is then deferred for up to 12 months, enabling offenders to demonstrate remorse and potential for rehabilitation, and address the underlying risk factors impacting on their offending by engaging with programs and services. Thus, Koori Courts are far more intensive in nature than many restorative justice initiatives. Two further important differences are that: (1) YKC participants inform the sentencing process but the final sentencing decision sits with the presiding judge or magistrate and, (2) the victim does not attend proceedings in the Youth Koori Court.

Aboriginal sentencing courts have been applied extensively in Australia (Marchetti & Daly, 2004; Marchetti, 2017) but their impact on imprisonment and recidivism rates of Aboriginal people has not been systematically examined. The exception is two studies evaluating outcomes for Aboriginal adults who participated in Circle Sentencing in NSW (Fitzgerald, 2008; Yeong & Moore, 2020). Circle Sentencing involves magistrates working with Aboriginal Elders, victims, and the offender's family to determine an appropriate sentence. Yeong and Moore (2020) compared 656 Circle Sentencing cases with cases sentenced in the traditional way and found that Circle Sentencing was associated with significant reductions in incarceration and recidivism even after adjusting for defendant and case characteristics. This contrasts with earlier findings reported by Fitzgerald (2008), which suggested no differences in re-offending between 68 Circle Sentencing participants and a matched control group. The conflicting results from these evaluations may be due to the program's maturity (as Yeong and Moore examined outcomes for more recent graduates) or because of the larger sample size used in the more recent study.

A defining feature of YKC, that sets it apart from other Aboriginal sentencing approaches like Circle Sentencing, is the problem-solving or rehabilitative aspects of the model. A recent meta-analysis of 15 evaluations of problem-solving courts with judicial supervision in Australia and New Zealand (Trood, Spivak, & Ogloff, 2021) identified that these approaches are associated with significant reductions in the frequency and likelihood of re-offending compared to the standard court process. As with the reviews of restorative justice initiatives cited above, these authors noted that the estimated treatment effects tended to be larger for less rigorous studies, but also when the supervision period was counted in the follow-up period (as opposed to studies which considered recidivism after finalisation only). Thus, at least some of the benefits may arise from supervision as opposed to rehabilitation. Furthermore, most of these studies related to adults and a substantial proportion evaluated models designed to address drug or substance abuse. While there is some international evidence to support the use of problem-solving courts for young people, most of this pertains to drug courts. A systematic review by Madell, Thom, and McKenna (2013) examined 24 studies of problem-solving courts for young offenders, 20 of which related to drug courts. Many of these studies identified positive impacts on criminal behaviour but few involved rigorous methods which could separate program impacts from potential selection bias.

There are two Australian studies of Aboriginal sentencing courts for young Aboriginal people. The Magistrates' Court of Victoria provides Aboriginal young people with an alternative to standard sentencing, known as the Koori Court. The Victorian Koori Court is primarily an informal sentencing court, which involves the representation of Aboriginal people in the sentencing process, court problem-solving and referral to services. Borowski (2010) studied the impact of the Victorian Koori Court program on several outcomes, including the incidence of failure-to-appear before the court, breaches of court orders and recidivism. The author reports that, among the 62 Aboriginal young people who participated, seven young offenders (or 11%) failed to appear and eight (or 13%) breached a court order. In terms of recidivism, 37 young people (or 60%) were re-convicted of a new and proven offence and 49 (or 79%) were re-arrested. However, the study did not include a counterfactual group and, consequently, their findings should be interpreted as descriptive.

The pilot of the NSW YKC was subject to a review by Williams et al. (2018). The review described how the pilot was operating and used data gathered from interviews, observations, and transcripts of proceedings, as well as information from the YKC action and support plans. The review also descriptively examined program impact for 18 of the 20 young people who had graduated from the YKC between July and December 2016. Of these, they found reductions in the number of days spent in custody during the YKC compared to an equivalent period beforehand (i.e. an average of 25 vs. 75 days in the equivalent period beforehand). There was also a reduction in the number who entered custody. Of the 18 participants, 14 experienced a custody episode prior to their entry into YKC and 7 did so after. This analysis included only a very small number of defendants and, like the Victorian evaluation, did not compare outcomes for YKC participants with a control group.

In summary, there is mixed evidence supporting various elements of the YKC approach. Some studies of restorative justice approaches indicate promising results, but several authors have identified that higher-quality randomised controlled trials find diminished effects. Culturally appropriate sentencing for Aboriginal adults has been found to be associated with reductions in recidivism in NSW but this model does not incorporate the rehabilitative aspects of the YKC. While there is promising evidence on problem-solving courts for young people, so far this has largely related to drug courts and may be of less relevance to YKC. Lastly, examinations of the YKC model so far have been descriptive and focused more on implementation, rather than effectiveness.

Current study

The current study expands upon the analysis of Williams et al. (2018) by examining the impact of the NSW YKC on sentencing and re-offending outcomes for Aboriginal young people. The youth justice outcomes of interest in this study are the probability of being sentenced to a juvenile control order (JCO) at finalisation of their index matter and the probability of re-offending. Outcomes for Aboriginal young people referred to the YKC are compared to outcomes for similar Aboriginal young people who proceed through the usual Children's Court process.

METHOD

Data

The data used in this study were obtained from two sources. The first dataset was provided by Court Services in the NSW Children's Court and contains details for every young person referred to the YKC at both the Parramatta and Surry Hills CC between February 2015 and January 2021. This data includes information such as the date of referral, first appearance, admittance into YKC, and finalisation (i.e. sentence) date. It also includes the court of first appearance, finalisation, and sentencing. In total, the dataset contains records for 151 young people referred to the YKC at both Parramatta and Surry Hills CC.

This data was linked with the NSW Bureau of Crime Statistics and Research Re-offending Database (ROD), which was the second dataset used in this study. The ROD dataset used in this study contains records for every Aboriginal young person who had a matter finalised in a NSW CC between January 2010 and January 2021. Court records for Aboriginal young people included in the comparison group (described in further detail below) were also obtained from ROD. For each finalised CC appearance, the ROD data included: the offence and finalisation date; a wide range of individual-level demographics, such as Aboriginality, age, gender, and area of residence; a detailed offending history for each young person, including the number of prior finalised criminal court appearances, prior custodial episodes, previous offence types committed, and the penalty imposed by the court; and subsequent offences. To measure recidivism, details of all proven offences after the index court finalisation date were extracted from ROD, including information on the date and type of re-offence, and the subsequent penalty handed down by the court.

Empirical approach

To measure the impact of the YKC on sentencing and rates of re-offending, the youth justice outcomes of interest are:

1. Probability of ‘imprisonment for the index offence’: the probability the young person is sentenced to a juvenile control order (JCO)⁴ at the index court finalisation. This is a binary outcome equal to one if the young person is sentenced to a JCO and zero otherwise;
2. Probability of ‘re-conviction’ among young people who were not sentenced to a JCO at index court finalisation: a binary outcome equal to one if the young person commits a new and proven offence within 12 months of the index court finalisation, and zero otherwise;⁵ and
3. Probability of ‘imprisonment for a new offence’ among young people who were not sentenced to a JCO at index court finalisation: a binary outcome equal to one if the young person is sentenced to a JCO for committing a new and proven offence within 12 months of the index finalisation, and zero otherwise.

While the first outcome is measured for all young people in the sample (that is, all finalisations up to and including January 2021), outcomes 2 and 3 only include young people who were sentenced to a community-based order at the index court finalisation and whose matter was finalised by the end of March 2019.⁶ Although the YKC aims to reduce the rate of non-appearances and bail breaches committed by Aboriginal young people, these outcomes are not measured in this study. This is because young people who participate in the YKC typically have a much longer duration between their first court appearance and sentencing compared with young people whose matter is finalised in the usual way. As a result, YKC participants have a substantially greater opportunity to breach their bail conditions or fail to appear relative to Aboriginal young people in the comparison group.

The comparison group for this analysis consists of 2,883 Aboriginal young people who satisfy the YKC eligibility criteria specified above but who had their matter finalised in an NSW specialist CC where the YKC was not available. These are the Broadmeadow, Campbelltown, Port Kembla, Woy Woy, and Wyong specialist CCs. In other words, the comparison group includes Aboriginal young people who had their matter finalised under standard court proceedings at a specialist CC.

Two identification strategies are used to estimate the impact of participating in the YKC on youth justice outcomes. The first is a linear probability regression model:

$$Y_{it} = \alpha_0 + \alpha_1 YKC_{it} + \alpha_2 X_{it} + \tau_t + \varepsilon_{it} \quad (1)$$

⁴ Juvenile control orders are a custodial sentence for offenders, comprising of a period of (up to two years of) custody in a youth detention centre. Outcomes 1 and 3 include both JCOs and any other full-time imprisonment penalty imposed by the court.

⁵ Re-conviction is only measured within 12 months of finalisation instead of a longer follow-up period due to the small sample size. Re-conviction does not include breach of order offences.

⁶ This was to allow for a 12-month follow-up to measure recidivism before the COVID-19 shutdown period began in NSW.

where Y_{it} are the youth justice outcomes described earlier for an Aboriginal young person i finalised at time t and ε_{it} is the error term. The impact of participating in the YKC on youth justice outcomes is measured by the coefficient α_1 . YKC_{it} is a binary variable equal to one for a young person i referred to the YKC at either Parramatta or Surry Hills CC at time t and zero for a young person sentenced normally in the CC. Equation 1 only includes Aboriginal young people who had a matter finalised since the establishment of the YKC in February 2015.

To measure the impact of referral to the YKC on recidivism, the sample is limited to young people referred to Parramatta YKC only. This is because the recidivism outcomes are measured for young people with a matter finalised before 31 March 2019 and the YKC at Surry Hills CC did not commence operations until February 2019.⁷

Equation 1 also contains a wide range of individual-level control variables (X_{it}). These include demographics (age at index finalisation, residential area and sex) and case characteristics at index court finalisation (bail status, number of proven concurrent charges, and offence types). The vector of controls also includes each young person's prior offending history, which is measured by the number of prior JCOs and unsupervised juvenile orders, finalised criminal court appearances, police cautions, youth justice conferences and prior offence types. The model outlined in Equation 1 also includes month-by-year fixed effects τ_t relating to the index finalisation.

We can consider α_1 as the causal effect of YKC if there is no omitted variable bias. Specifically, there should be no other factor missing from Equation 1 which affects participation in YKC and criminal justice outcomes. We have made efforts to include a wide array of controls but there is reason to believe that such factors remain unaccounted. Consider the example of motivation; a young person who is more motivated may be more likely to participate in YKC, and be less likely to receive a JCO and/or re-offend. Without being able to control for this, and other unobserved factors, the estimate we obtain may over or underestimate the impact of YKC.

To supplement the regression estimates, we also apply a Difference-in-Differences (DiD) strategy. The DiD model in this study estimates the change in outcomes before and after the establishment of the YKC at Parramatta CC using the following equation:

$$Y_{it} = \beta_0 + \beta_1 J_i + \beta_2 P_t + \beta_3 (J_i \times P_t) + \beta_4 X_{it} + \tau_t + v_{it} \quad (2)$$

where P_t is a binary variable equal to one for the period after the establishment of the YKC at Parramatta (February 2015 onward) and zero for the pre-period (January 2010 to January 2015). The binary variable J_i is equal to one for the treatment group and zero for the comparison group (discussed further below). Other variables in Equation 2 are X_{it} , which is a vector of control variables described previously and the error term (v_{it}). The coefficient β_3 estimates the change in youth justice outcomes (Y_{it}) for eligible young people in the Parramatta CC before and after the establishment of the YKC. The variable Y_{it} includes each of the youth justice outcomes described above for Aboriginal young person i at time t .

A challenge for this analysis is that not all eligible Aboriginal young people in the Parramatta CC are referred to the YKC. Thus, we use a matching strategy to derive the group of young people appearing in the Parramatta CC prior to the commencement of YKC who would likely have been referred had the YKC been in place. More specifically, in the post-period, J_i is a binary variable equal to one for every Aboriginal young person referred to the YKC at Parramatta CC. In the pre-period, J_i is equal to one for Aboriginal young people who: (1) had their matter finalised at Parramatta CC between January 2010 and January 2015; (2) met the YKC eligibility criteria; and (3) could be matched on observable characteristics with an Aboriginal young person referred to YKC. The matching was performed via nearest-neighbour propensity score matching to obtain an observationally similar group of Aboriginal young people appearing at Parramatta CC in the pre-period. Consequently, this analysis assumes that the Aboriginal young people with matters finalised at Parramatta CC between January 2010 and January 2015, who were matched

⁷ Consequently, when measuring recidivism, the sample is limited to young people with a matter finalised between February 2015 and March 2019.

with the YKC participants in the post period, would have been referred to YKC had the program been available.⁸ The comparison group in the pre and post periods are Aboriginal young people with a matter finalised at a specialist CC.

An important assumption of the DiD model in this study is that the trends in youth justice outcomes for Aboriginal young people referred to the YKC approximates those for Aboriginal young people in the comparison group, absent any intervention. In other words, we consider any deviation in the trends in offending post-YKC for young people in the Parramatta CC and those in the comparison group as the treatment effect. To test this, we examine trends in offending pre-YKC for both groups. Specifically, we examine trends in outcomes for the matched group of Aboriginal young people with matters finalised at Parramatta CC and the comparison group. If these are parallel, this indicates that Aboriginal young people in the comparison group are a valid counterfactual for the treatment group. A further assumption is that there are no confounding changes that differentially affect the young people in the Parramatta CC or the comparison group.

To explore heterogeneity of treatment effects, both the regression and DiD models are estimated separately for young people with different levels and types of prior offending. Specifically, outcomes are examined separately for young people who did not have any prior custodial episodes and for young people who were charged with either a violent or property offence(s).⁹ In general, violent and property offences are considered to be relatively more serious types of offending. Further, as the YKC defers sentencing to provide Aboriginal young people with an opportunity to demonstrate their prospects of rehabilitation, it is possible that those referred to YKC without any prior custodial episodes have an even greater chance of avoiding a JCO at finalisation.

RESULTS

Descriptive statistics

Table 1 summarises key characteristics of the Parramatta and Surry Hills YKC in columns 1 and 2, respectively. Among those referred to YKC in the sample, 85.4% had their matter finalised at the Parramatta CC and 14.6% had their matter finalised at Surry Hills CC. The majority of young people in the sample are from the Parramatta YKC because it was established earlier than the Surry Hills YKC. The average number of days from referral to the index finalisation was approximately 254 days for young people referred to Parramatta YKC and 295 days for young people referred to Surry Hills YKC. Around 73% of young people referred to the Parramatta YKC successfully graduated from the program, while 55% referred to the Surry Hills YKC graduated. Again, the lower proportion of graduates at Surry Hills YKC may reflect the fact that YKC was established at Surry Hills CC much later than Parramatta. Approximately 73% of young people referred to Parramatta YKC and 82% referred to Surry Hills YKC were male.

⁸ Table A1 of the Appendix presents a balance test of the covariates used to match YKC participants and Aboriginal young people finalised at Parramatta CC in the pre-period. Overall, the two groups appear to be successfully matched. Column 3 presents the differences in the mean characteristics. Each of the differences are small and the *p*-values are quite large, which indicates that the difference in the means are not statistically significant. Although YKC participants and Aboriginal young people finalised at Parramatta CC are successfully matched, it is not possible to test the assumption that those matched with YKC participants would have been referred in the YKC had it been available to them.

⁹ These offence categories are based on the Australian and New Zealand Standard Offence Classification (ANZSOC) (Australian Bureau of Statistics, 2011). A violent offence includes the following offences: homicide or related offences (01), acts intended to cause injury (02), sexual assault and related offences (03) and robbery, extortion and related offences (06). Property offences include unlawful entry with intent/burglary, break and enter (07), theft and related offences (08), fraud, deception and related offences (09) and property damage and environmental pollution offences (12).

Table 1. Descriptive statistics: Key features of the Parramatta and Surry Hills Youth Koori Court

	Parramatta (1)	Surry Hills (2)
Establishment date	February 2015	February 2019
Proportion of YKC participants	0.854 (0.029)	0.146 (0.029)
Mean days between referral and index court finalisation	256.326 (12.481)	294.727 (39.636)
Graduated	0.729 (0.039)	0.545 (0.106)
Male	0.729 (0.039)	0.818 (0.082)
Breach of order index offence	0.124 (0.029)	0.091 (0.061)
<i>Observations</i>	129	22

Note. Standard errors are reported in brackets

Table 2 describes the demographic characteristics and offending history of young people referred to the YKC (column 1) and those in the comparison group (column 2). Column 3 calculates the difference between the two groups.

Panel A includes demographic and offence characteristics at index court finalisation. Roughly 75% of young people in the YKC and comparison groups are male and, on average, are roughly 16 years of age at finalisation. Just over 80% of YKC participants resided in a major city at index court finalisation, which is less than the comparison group (87.8%). The average number of days between first court appearance and finalisation is much larger for YKC participants (245 days approximately) than the comparison group (89 days approximately). This is not surprising as sentencing is usually deferred for up to 12 months for young people who participate in YKC (Duncombe, 2015). Panel A also indicates that YKC participants are 3.2 percentage points more likely to be bail refused (but the difference is not statistically significant) and have approximately six more proven concurrent charges, on average. YKC participants are also more likely to be charged with a violent or property offence than young people in the comparison group.

Panel B describes the prior offending history of the young people in the sample. In the two years prior to the index court finalisation, 62.3% of YKC participants had committed at least one proven violent offence. In contrast, 47.1% of young people in the comparison group had committed at least one proven violent offence within two years prior to the index court finalisation. YKC participants are also 22.8 percentage points more likely to have committed at least one proven property offence in the two years prior to finalisation. The proportion of historic domestic violence offences is similar for young people referred to YKC and those in the comparison group.

The second half of Panel B describes the mean number of prior penalties, custodial episodes and finalised criminal court appearances for the Aboriginal young people included the sample. On average, young people referred to the YKC have a larger number of prior JCOs, unsupervised juvenile orders and cautions. YKC participants also have a larger number of prior finalised criminal court appearances and have participated in a greater number of youth justice conferences, on average, than the comparison group.

Table 2. Descriptive statistics: Characteristics of YKC participants and comparison group

	YKC participants (1)	Comparison (2)	Difference (3)
Panel A. Characteristics at index court finalisation			
Male	0.742 (0.036)	0.760 (0.008)	-0.018
Age at finalisation	16.881 (0.101)	15.881 (0.029)	1.000***
Major city residential location	0.808 (0.032)	0.878 (0.006)	-0.070**
Days between first appearance and finalisation	245.497 (12.082)	88.979 (1.951)	156.968***
Bail refused at finalisation	0.179 (0.031)	0.147 (0.007)	0.032
Number of proven concurrent charges	11.040 (0.681)	4.754 (0.099)	6.286***
At least one violent offence	0.689 (0.038)	0.420 (0.009)	0.269***
At least one property offence	0.762 (0.035)	0.421 (0.009)	0.341***
Panel B. 2 year prior offending history			
Any prior violent offence	0.623 (0.039)	0.471 (0.009)	0.152***
Any prior property offence	0.834 (0.030)	0.606 (0.009)	0.228***
Any prior domestic violence offence	0.252 (0.035)	0.236 (0.008)	0.016
Number of prior juvenile control orders	0.781 (0.108)	0.455 (0.024)	0.326***
Number of prior unsupervised juvenile orders	1.179 (0.097)	0.761 (0.021)	0.418***
Number of prior police cautions	1.927 (0.141)	0.926 (0.024)	1.001***
Number of prior finalised criminal court appearances	4.728 (0.281)	2.827 (0.060)	1.901***
Number of prior finalised Children's Court appearances	4.371 (0.262)	2.707 (0.059)	1.664***
Number of prior youth justice conferences	0.788 (0.107)	0.575 (0.017)	0.213***
Panel C. Unadjusted youth justice outcomes			
JCO at index finalisation	0.238 (0.035)	0.146 (0.007)	0.092***
Observations	151	2,883	
Re-conviction	0.632 (0.055)	0.693 (0.011)	-0.061
JCO at re-conviction	0.079 (0.031)	0.091 (0.007)	-0.012
Observations	76	1,825	

Note. Standard errors are reported in parentheses. Recidivism outcomes in Panel C are measured from 12 months of index court finalisation and only among Aboriginal young people who were not sentenced to a JCO at index court finalisation. Violent offences include homicide and related offences; acts intended to cause injury; sexual assault and related offences; and robbery, extortion or related offences. Property offences include unlawful entry with intent/burglary, break and enter; theft and related offences; fraud, deception and related offences; and property damage and environmental pollution.

*** $p < .01$, ** $p < .05$, * $p < .10$

Panel C presents the unadjusted rates for the youth justice outcomes examined in this study. As seen here, 23.8% of YKC participants (column 1) and 14.6% of young people in the comparison group (column 2) were sentenced to a JCO at index court finalisation. Thus, before controlling for differences between the two groups, YKC participants are 9.2 percentage points more likely to be sentenced to a JCO, which is statistically significant at the 1% level. Panel C also includes unadjusted rates of recidivism among young people who were not sentenced to a JCO at finalisation. Within 12 months of finalisation, 63.2% of YKC participants (column 1) and 69.3% of young people in the comparison group (column 2) were re-convicted of a new and proven offence. This means that YKC participants are 6.1 percentage points less likely to be re-convicted before controlling for confounding variables. Furthermore, 7.9% of YKC participants and 9.1% of young people in the comparison group were sentenced to a JCO at re-conviction. Thus, YKC participants are 1.2 percentage points less likely to be imprisoned for a new offence based on these unadjusted rates. However, as shown by differences in the previous panels, YKC participants tend to commit more serious offences and have longer offending histories than Aboriginal young people in the comparison group. When interpreting the youth justice outcomes in Panel C, it is important to note that these rates do not control for differences between the two groups that are related to sentencing outcomes and recidivism. The next section presents results from the regression and DiD analyses that estimate the impact of the YKC on youth justice outcomes after accounting for differences between the two groups.¹⁰

Regression results

Table 3 presents the estimated marginal impact of participating in the YKC on youth justice outcomes from Equation 1 for the full sample. Panel A displays the impact of the YKC on the probability of being sentenced to a JCO at index court finalisation. Panel B displays the impact of the YKC on the probability of recidivism and reimprisonment among young people not sentenced to a JCO. The control variables are added to the regression model consecutively across columns 1 to 3. A negative marginal effect indicates that YKC referrals are less likely to experience the outcome of interest. Overall, the results displayed in Table 3 indicate that, relative to Aboriginal young people sentenced via the standard court process, YKC participants are less likely to be sentenced to a JCO even after including a wide variety of control variables in the regression specification.

Beginning with Panel A, the probability of being sentenced to a JCO among YKC participants varies considerably between columns 1 and 3. The estimates in column 1 only include controls for demographic characteristics and time fixed effects. It shows that in comparison with Aboriginal young people who have their matter finalised in the usual way at a specialist CC, YKC participants are 8 percentage points more likely to be sentenced to a JCO. However, once offence types at index court finalisation are also included as controls (see column 2), the sign on the coefficient changes: YKC participants become 4.6 percentage points less likely to be sentenced to a JCO. With the full set of control variables included (column 3), YKC participants are 5.9 percentage points less likely to be sentenced to a JCO compared with Aboriginal young people whose matter is finalised in a specialist CC. The reduction is statistically significant at the 5% level.

Panel B displays the regression coefficients from Equation 1 for recidivism and imprisonment at re-conviction within 12 months of finalisation among young people who were not sentenced to a JCO. With the inclusion of the full set of control variables (column 3), YKC participants are 5.7 percentage points less likely to be re-convicted of a new offence, but the reduction is not statistically significant. YKC participants are also 7.6 percentage points less likely to be sentenced to a JCO at re-conviction and this is statistically significant at the 5% level.

¹⁰ Table A1 in the Appendix presents descriptive statistics for demographics and offending history of YKC participants only. Columns 1 and 2 include YKC participants from Parramatta and Surry Hills CCs, respectively. Overall, both groups of participants have similar demographics and prior offending histories, on average. However, YKC participants that were finalised at Surry Hills CC were more likely to have a greater number of proven concurrent charges and were more likely to have at least one violent offence at index court finalisation. Furthermore, YKC participants that were finalised at Surry Hills CC were 20 percentage points more likely to receive a JCO at index finalisation. While these differences were statistically significant, it is important to note the small number of observations for Surry Hills CC.

Table 3. Regression results for sentencing and recidivism outcomes: Full sample

	(1)	(2)	(3)
Panel A. Sentencing			
Juvenile control order at index finalisation	0.080** (0.035)	-0.046* (0.027)	-0.059** (0.027)
<i>Observations</i>	3,034	3,034	3,034
Panel B. Recidivism			
Re-conviction	0.003 (0.059)	-0.022 (0.062)	-0.057 (0.061)
JCO at re-conviction	-0.009 (0.033)	-0.042 (0.037)	-0.076** (0.037)
<i>Observations</i>	1,901	1,901	1,901
<i>Controls</i>			
Demographics	Yes	Yes	Yes
Offences at index court finalisation	No	Yes	Yes
Prior offending history	No	No	Yes

Note. Robust standard errors are reported in parentheses. Each regression includes fixed effects for month and year of index court finalisation. Recidivism outcomes in Panel B are measured from 12 months of index court finalisation and only among Aboriginal young people who were not sentenced to a JCO at index court finalisation.

*** $p < .01$, ** $p < .05$, * $p < .10$

Regressions results: subgroup analysis

The results in Table 3 indicate that young people referred to YKC are less likely to be sentenced to a JCO at index finalisation, and among those not imprisoned, are less likely to be sentenced to a JCO if re-convicted. Next, Table 4 presents estimates of the marginal effect of the YKC on Aboriginal young people with different prior offending records. Once more, panel A contains the results for the sentencing outcome and panel B displays the re-offending results. Every column includes the full set of control variables.

Column 1 presents estimates for young people who did not have any custodial episodes prior to index court finalisation. YKC participants with no prior custodial episodes are 7.7 percentage points less likely to be sentenced to a JCO than Aboriginal young people in the comparison group. This reduction is statistically significant at the 1% level.

Columns 2 and 3 include young people charged with at least one violent or property offence at index court finalisation. These offences are typically considered to be relatively more serious in nature. Among young people charged with a violent offence(s), YKC participants are 7.7 percentage points less likely to be sentenced to a JCO (column 2) than those in the comparison group. Column 3 includes regression estimates for young people charged with at least one property offence. The results show that these YKC participants are 5.5 percentage points less likely to be sentenced to a JCO than Aboriginal young people in the comparison group, and the reduction is statistically significant at the 10% level. The marginal effects in panel B indicate that YKC participants with a property offence are 13.7 percentage points less likely to be re-convicted and 12 percentage points less likely to receive a JCO at re-conviction, and both reductions are statistically significant.

Table 4. Regression results for sentencing and recidivism: Subgroup analysis

	No prior custodial episodes (1)	At least one violent offence (2)	At least one property offence (3)
Panel A. Sentencing			
Juvenile control order at index finalisation	-0.077*** (0.027)	-0.077** (0.035)	-0.055* (0.033)
Observations	2,440	1,316	1,873
Number of YKC participants	99	104	126
Panel B. Recidivism			
Re-conviction	-0.007 (0.068)	-0.052 (0.082)	-0.137* (0.071)
JCO at re-conviction	-0.037 (0.038)	-0.077 (0.049)	-0.120*** (0.042)
Observations	1,664	758	1,129
Number of YKC participants	57	49	60
Controls			
Demographics	Yes	Yes	Yes
Offences at index court finalisation	Yes	Yes	Yes
Prior offending history	Yes	Yes	Yes

Note. Robust standard errors are reported in parentheses. Each regression includes the full set of control variables, and fixed effects for month and year of index court finalisation. Recidivism outcomes in Panel B are measured from 12 months of index court finalisation and only among Aboriginal young people who were not sentenced to a JCO at index court finalisation.

*** $p < .01$, ** $p < .05$, * $p < .10$

Difference-in-Differences results

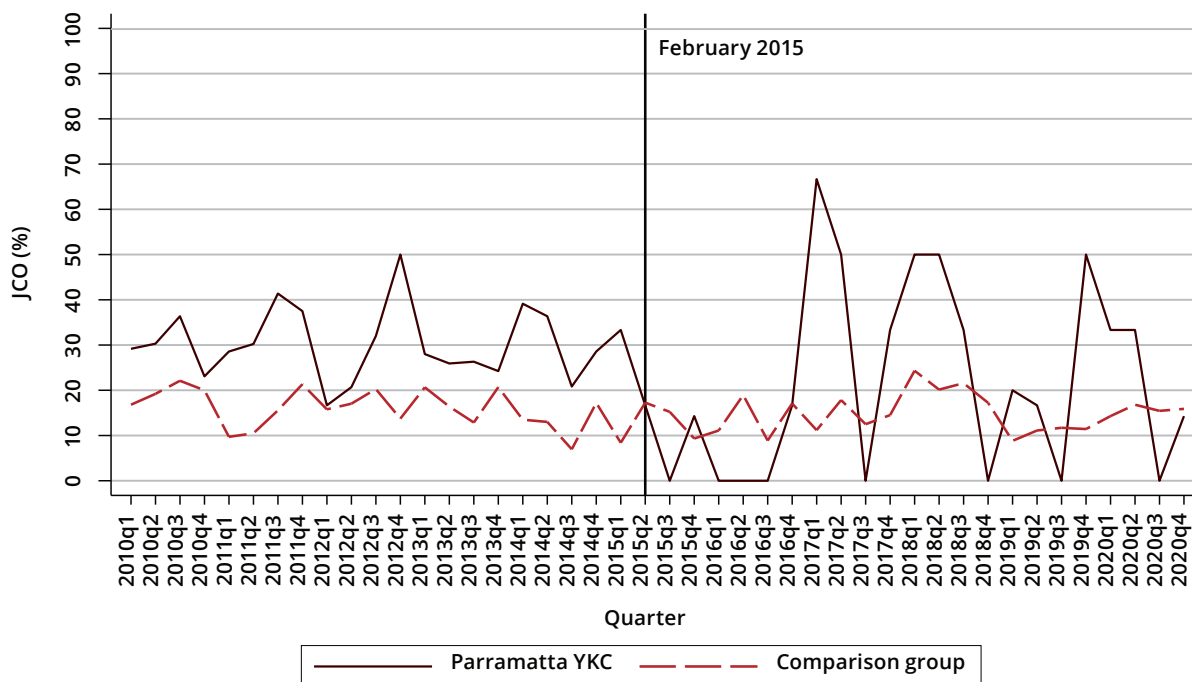
The regression estimates presented in Tables 3 and 4 suggest that Aboriginal young people referred to YKC are less likely to be sentenced to a JCO at finalisation and, among those not detained, are less likely to be sentenced to a JCO if re-convicted. However, these results are indicative of an associative, rather than a causal, relationship. While the regression model controls for a wide variety of offender characteristics and offence types, it is likely that unobserved differences remain. For example, a young person's commitment to change may be a critical factor which leads to their participation in YKC, and which is also considered by a magistrate in sentencing (even if they had gone through the usual sentencing pathway). To supplement the regression model, this section presents results from the DiD specification outlined in Equation 2, which measures the change in Aboriginal youth justice outcomes before and after the establishment of the YKC at Parramatta CC.

Trends in Aboriginal youth justice sentencing outcomes

In the context of this study, an assumption of the DiD model is that trends in sentencing prior to the establishment of the YKC are similar for the treatment and the comparison groups. Figure 1 tests this assumption by plotting the percentage of JCOs each quarter from January 2010 to December 2020 for Aboriginal young people in the treatment and comparison groups. The solid trend line is the percentage of YKC participants (in the post-period) and matched Aboriginal young people (in the pre-period) with a matter finalised at Parramatta CC who were sentenced to a JCO. The dashed trend line is the percentage of Aboriginal young people with a matter finalised at the specialist CCs who were sentenced to a JCO. The vertical black line indicates February 2015, which is the date that the YKC was initially established at Parramatta CC.

As illustrated by Figure 1, the pre-period (before February 2015) trends in JCOs are relatively similar for the treatment and comparison groups, with only a few exceptions (for instance, quarter 4 in 2012). Given these common trends in JCOs, young people with a matter finalised in the specialist CCs are considered a valid counterfactual for this outcome.

Figure 1. Quarterly trends in JCOs for Aboriginal young people in the treatment and comparison groups, January 2010 - December 2020



The trends in re-conviction within 12 months of finalisation among young people that were not sentenced to a JCO are presented in Figure A1 in the Appendix. It shows that the pre-period (before February 2015) trends in re-conviction rates for the YKC and comparison groups frequently diverge. Without evidence to support common trends, young people with a matter finalised in the specialist CCs cannot be considered a valid counterfactual for this outcome. Similarly, without a counterfactual for re-conviction rates, it is not possible to compare the probability of imprisonment for a new offence. Consequently, the DiD results in the next section will focus only on the impact of YKC on the probability of receiving a JCO at the index court finalisation.

Difference-in-differences results: full sample

Table 5 includes the findings from the DiD model outlined in Equation 2 for the probability of being sentenced to a JCO at index court finalisation. These estimates compare the change in this sentencing outcome before and after the establishment of the YKC at Parramatta CC in February 2015. The control variables outlined previously are added progressively from columns 1 to 3. Each column includes fixed effects for month and year of finalisation.

Overall, the estimates in column 3 reveal that Aboriginal young people referred to the YKC at Parramatta CC are 8.1 percentage points less likely to be sentenced to a JCO at their index court finalisation than the comparison group. This reduction is statistically significant and the estimates between columns 1 to 3 are relatively stable to the inclusion of additional control variables. Notably, the DiD estimates in Table 5 are consistent with the regression results presented earlier (panel A of Table 3); that is, both models reveal that Aboriginal young people referred to the YKC are less likely to be sentenced to a JCO at index court finalisation. In fact, the DiD estimate with the full set of control variables (column 3) is slightly larger than the OLS coefficient (column 3 of Table 3).

Table 5. Difference-in-Differences results for the probability of receiving a JCO: Full sample

	(1)	(2)	(3)
Juvenile control order at index court finalisation	-0.087** (0.041)	-0.077** (0.030)	-0.081*** (0.029)
<i>Observations</i>	6,228	6,228	6,228
<i>Controls</i>			
Demographics	Yes	Yes	Yes
Offences at index court finalisation	No	Yes	Yes
Prior offending history	No	No	Yes

Note. Robust standard errors are reported in brackets. Each model includes fixed effects for month and year of index finalisation.

*** $p < .01$, ** $p < .05$, * $p < .10$

Difference-in-differences results: subgroup analysis

Table 6 displays the DiD estimates for three YKC subgroups: (1) those with no prior custodial episodes; (2) those with a violent offence at the index finalisation and; (3) those with a property offence at the index finalisation. The outcome variable is the probability of being sentenced to a JCO at finalisation and each column includes the full set of control variables.

Beginning with those who had no prior custodial episodes (column 1), the DiD estimates suggest that Aboriginal young people referred to YKC at Parramatta CC are 11.8 percentage points less likely to be sentenced to a JCO at finalisation than observationally similar Aboriginal young people who were eligible for YKC but had their matter finalised before the YKC was established in Parramatta. The reduction is statistically significant at the 1% level. Importantly, this reduction is larger than the estimates reported for the full sample in Table 5. This suggests that the YKC is more effective at diverting Aboriginal young people who are generally less risky (i.e. those with no prior custodial episodes) from a full-time custodial penalty.

The results in columns 2 and 3 estimate the change in the probability of a JCO among those charged with at least one violent offence and at least one property offence, respectively, at the index finalisation. Starting with those charged with at least one violent offence, Aboriginal young people referred to YKC are 8.5 percentage points less likely to be sentenced to a JCO at finalisation, which is statistically significant at the 5% level. In column 3, there is a similar reduction in the probability of being sentenced to a JCO among YKC participants charged with at least one property offence (8.9 percentage points). The reduction for property offenders is statistically significant at the 1% level. Generally, the DiD findings in Table 6 are similar to the regression estimates presented earlier in panel A of Table 4; that is, both models indicate that Aboriginal young people referred to the YKC who have different offending profiles are less likely to be sentenced to a JCO at finalisation.

Table 6. Difference-in-Differences results for the probability of receiving a JCO: Subgroup analysis

	No prior custodial episodes (1)	At least one violent offence (2)	At least one property offence (3)
Juvenile control order at index court finalisation	-0.118*** (0.026)	-0.085** (0.038)	-0.089*** (0.035)
<i>Observations</i>	4,923	2,634	3,815
<i>Controls</i>			
Demographics	Yes	Yes	Yes
Offences at index court finalisation	Yes	Yes	Yes
Prior offending history	Yes	Yes	Yes

Note. Robust standard errors are reported in brackets. Each model includes the full set of control variables, and fixed effects for month and year of index court finalisation.

*** $p < .01$, ** $p < .05$, * $p < .10$

DISCUSSION

The aim of this study was to measure the impact of the establishment of the YKC on Aboriginal youth sentencing and re-offending outcomes. Overall, the main regression results indicated that YKC participants were 5.9 percentage points less likely to receive a JCO at the index court finalisation relative to Aboriginal young people whose matter was finalised via the standard Children's Court process. This is equivalent to a 40% reduction in the probability of a JCO. These results were supported by a DiD analysis comparing imprisonment outcomes before and after the establishment of the YKC at Parramatta CC. The main regression results also found that, among young people not sentenced to a JCO, YKC participants were 5.7 percentage points less likely to be re-convicted of any new offence and 7.6 percentage points less likely to be sentenced to a JCO at re-conviction. Only the latter difference is statistically significant at conventional levels and equates to an 84% decrease in the probability of a JCO at re-conviction for YKC participants. These reductions in imprisonment likelihood remain even after including a wide range of control variables in the regression specification. Further regression analyses reveal that Aboriginal young people referred to YKC with no prior custodial episodes, or those charged with a violent or property offence are less likely to be sentenced to a JCO at index court finalisation and, at least for property offenders, less likely to re-offend within 12 months of finalisation.

A benefit of the YKC model beyond standard CC proceedings is that the magistrate has access to substantially more information about the young person; in particular the risk factors contributing to their contact with the youth justice system, and their prospects of rehabilitation at the point of sentencing. Aboriginal young people that participate in the YKC have their sentencing deferred for up to 12 months in order for a case management plan to be developed and, where necessary, for the young person to participate in programs or receive services to address any factors related to their offending behaviour. This provides the young person with the opportunity to demonstrate their commitment to behavioural change and their willingness to build connections with their culture and community. This is information that is not typically available to a magistrate when sentencing a young person and is a likely reason for the substantial decrease in the probability of imprisonment found in this study. A further benefit of the YKC model is that it was purposefully designed for the unique needs of Aboriginal young people who come into contact with the youth justice system. Consequently, the YKC may be better positioned to more accurately assess the needs of the Aboriginal young person and identify suitable intervention(s) than are traditional CCs. This contrasts with other restorative justice programs such as the Youth Justice Conferencing models in NSW (Luke & Lind, 2002) and Queensland (see Little, Stewart, & Ryan, 2018), which are not uniquely designed for Aboriginal young people.

The results presented in this study are promising and point to a beneficial role for alternative case management processes for Aboriginal young people, particularly in reducing incarceration rates. However, there are a number of limitations of this study that should be considered alongside these results. First, the number of Aboriginal young people that have been referred to the YKC since its commencement in 2015 in Parramatta is very small. This is due to both the strict eligibility criteria for entry into YKC (outlined previously) and the intensive resource requirements of the YKC model. Small sample sizes are a common limitation of studies of youth justice programs and means that these studies have less power to detect small changes in outcomes (if they exist). This could be a potential explanation for the non-significant result for the 12-month rates of re-offending found here. Future research with a larger sample size of young people who have participated in the YKC and their long-term outcomes should be pursued.

A second limitation of the findings presented in this study is that the design used was unable to entirely rule out selection bias. Although the regression specifications included a wide range of control variables and the Aboriginal young people included in the comparison group were limited to those who met the (observable) eligibility criteria, it is possible that confounding variables remain unobserved in the model. For instance, young people referred to the YKC willingly participate and, consequently, could be more motivated to successfully comply with their case management plan(s) and engage with Aboriginal elders and court practitioners than Aboriginal young people in the comparison group. Similarly, in the DiD

analysis, while Aboriginal young people with matters finalised at Parramatta CC in the pre-period were matched with YKC participants, the analysis assumes that those in the pre-period would have agreed to participate had the YKC been available to them at the time. Consequently, the estimates presented in this study should be interpreted as associative rather than causal.

A third limitation is that failure to appear and breach of bail conditions were not included as outcomes in this study. As previously discussed, reducing the rate of non-appearances by young Aboriginal offenders in the court process and the rate at which young people breach bail orders are key objectives of the YKC. These outcomes could not be examined here because YKC participants spend substantially longer periods of time on bail and typically have a greater number of court appearances than young offenders whose matter proceeds through the usual court process. This would likely bias the estimated marginal effects against Aboriginal young people referred to the YKC, as they have more opportunity to breach their bail conditions or fail to appear. Given that offenders who abscond or breach court orders are much more likely to be sentenced to prison these are important outcomes for future evaluations of the YKC to consider. The current study also did not examine the extent to which the YKC increases the confidence of the Aboriginal community in the criminal justice system and/or improves outcomes for young people in non-justice domains (e.g. health, housing and education). These additional benefits of the Koori Court model are, however, being considered in other qualitative research commissioned by the Department of Communities and Justice.

The study's findings suggest that the alternative case management approach used in the YKC is a promising model that could be adopted more widely to reduce incarceration rates of young Aboriginal people. This could be achieved either by accepting more young people at the current locations or establishing a YKC in additional CCs. The success of such a strategy would however depend on two things. Firstly, the delivery of the YKC program requires a relatively intensive level of resources. Each young person is assigned a casework co-ordinator and they are encouraged to participate in relevant support programs and provided services where needed. Were the model to be expanded to areas where support services and programs are more difficult to access or where there are limited opportunities for community engagement, employment and/or safe housing, the effectiveness of this model may be diminished. Secondly, if the YKC program is expanded to include more participants, it may not be possible to provide the same level of case management to every young person, which could lead to smaller marginal effects than reported in this study. The effect of broadening of the eligibility criteria to include young people facing less serious court sanctions would also need to be tested.

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APPENDIX

Descriptive statistics: YKC participants from Parramatta and Surry Hills Children's Court

Table A1 presents descriptive statistics of YKC participants only. Columns 1 and 2 include YKC participants from Parramatta and Surry Hills CCs, respectively. Column 3 displays the difference between the two groups. When interpreting the descriptive statistics displayed in Table A1, it is important to note the small number of YKC participants with matters finalised at Surry Hills CC. Beginning with the characteristics of the participants in panels A and B, both groups of participants are quite similar, on average. The YKC participants finalised at Surry Hills CC were more likely to have more proven concurrent charges and were more likely to have at least one violent offence at index court finalisation. However, both groups have relatively similar characteristics.

Panel C displays the unadjusted rate of receiving a JCO at index finalisation. Recidivism outcomes are not included in panel C because recidivism is measured for young people with a matter finalised before 31 March 2019 and Surry Hills CC did not commence operations until February 2019. The YKC participants with matters finalised at Surry Hills were 20 percentage points more likely to receive a JCO at index finalisation relative to YKC participants from Parramatta CC. Again, while this difference is statistically significant at 1%, it is important to note the small number of observations for Surry Hills CC.

**Table A1. Descriptive statistics: Characteristics of YKC participants from Parramatta and Surry Hills
Children's Court**

	Parramatta (1)	Surry Hills (2)	Difference (3)
Panel A. Characteristics at index court finalisation			
Male	0.729 (0.039)	0.818 (0.082)	-0.089
Age at finalisation	16.829 (0.110)	17.182 (0.252)	-0.353
Major city residential location	0.798 (0.035)	0.864 (0.073)	-0.066
Days between first appearance and finalisation	239.961 (12.516)	277.955 (38.722)	-37.994
Bail refused at finalisation	0.155 (0.032)	0.318 (0.099)	-0.163*
Number of proven concurrent charges	10.566 (0.706)	13.818 (2.114)	-3.252*
At least one violent offence	0.659 (0.042)	0.864 (0.073)	-0.205*
At least one property offence	0.845 (0.032)	0.773 (0.089)	0.072
Panel B. 2 year prior offending history			
Any prior violent offence	0.628 (0.043)	0.591 (0.105)	0.037
Any prior property offence	0.760 (0.038)	0.818 (0.082)	-0.058
Any prior domestic violence offence	0.248 (0.038)	0.273 (0.095)	-0.025
Number of prior juvenile control orders	0.791 (0.119)	0.727 (0.265)	0.064
Number of prior unsupervised juvenile orders	1.194 (0.106)	1.091 (0.254)	0.103
Number of prior police cautions	1.984 (0.157)	1.591 (0.292)	0.393
Number of prior finalised criminal court appearances	4.860 (0.310)	3.955 (0.636)	0.905
Number of prior finalised Children's Court appearances	4.504 (0.291)	3.591 (0.549)	0.913
Number of prior youth justice conferences	0.798 (0.113)	0.727 (0.330)	0.071
Panel C. Unadjusted youth justice outcomes			
JCO at index finalisation	0.209 (0.036)	0.409 (0.105)	-0.200**
Observations	129	22	

Note. Standard errors are reported in parentheses. Violent offences include homicide and related offences; acts intended to cause injury; sexual assault and related offences; and robbery, extortion or related offences. Property offences include unlawful entry with intent/burglary, break and enter; theft and related offences; fraud, deception and related offences; and property damage and environmental pollution.

*** $p < .01$, ** $p < .05$, * $p < .10$

Pre and post period matching at Parramatta Children's Court

The DiD model in this study compares the change in youth justice outcomes before and after the establishment of the YKC at Parramatta CC between YKC participants and Aboriginal young people finalised at other specialist CCs. To determine the 'treatment' group in the pre-period (that is, between January 2010 and January 2015), Aboriginal young people finalised at Parramatta CC in the pre-period are matched with those referred to the YKC. Table A2 presents the findings from the covariate balance test of the propensity score matching (PSM) between Aboriginal young people referred to the YKC at Parramatta CC and Aboriginal young people with matters finalised in Parramatta CC in the pre-period. Aboriginal young people with matters finalised at Parramatta CC in the pre-period were matched with YKC participants via PSM nearest neighbour. Columns 1 and 2 present the mean of each covariate for the YKC participants and the matched pre-period group. Column 3 displays the difference between the two groups and the p -value. Overall, the p -values in column 3 are large, which indicates that the match was successful in balancing the covariates between the two groups.

Table A2. Pre and post period matching at Parramatta Children's Court: Balance test

	YKC participants (1)	Matched pre-period (2)	Difference (3)
Age at index finalisation	16.828	16.620	0.208 ($p = 0.216$)
Male	0.734	0.774	-0.040 ($p = 0.461$)
At least one violent offence at index finalisation	0.656	0.665	-0.009 ($p = 0.885$)
At least one property offence at index finalisation	0.844	0.827	0.017 ($p = 0.725$)
Number of proven concurrent charges at index finalisation	10.609	10.792	-0.183 ($p = 0.858$)
Number of prior juvenile control orders (2 years)	0.797	0.813	-0.016 ($p = 0.927$)
Number of prior finalised criminal court appearances (2 years)	4.875	4.964	-0.089 ($p = 0.844$)
Number of prior finalised children's court appearances (2 years)	4.516	4.681	-0.165 ($p = 0.701$)
Number of prior unsupervised juvenile orders (2 years)	1.203	1.257	-0.054 ($p = 0.725$)
Number of prior youth justice conferences (2 years)	0.805	0.849	-0.044 ($p = 0.777$)
Number of prior police cautions (2 years)	1.703	1.820	-0.117 ($p = 0.421$)

Note. Columns 1 and 2 present the mean of each characteristic for the YKC participants at Parramatta CC and the matched comparison group. Column 3 calculates the difference in mean characteristics and the p -value in brackets.

Trends in re-conviction between January 2010 and March 2019

Figure A1 plots the quarterly trend in the percentage of Aboriginal young people in the sample that are re-convicted of a new and proven offence within 12 months of finalisation. Re-conviction is only measured for Aboriginal young people who are not sentenced to a JCO at finalisation. The solid trend line is the percentage of YKC participants (in the post-period) and matched Aboriginal young people (in the pre-period) with matters finalised at Parramatta CC that were re-convicted. The dashed trend line is the percentage of Aboriginal young people finalised at the specialist CCs that were re-convicted. The vertical black line occurs at February 2015, which is the date that the YKC was initially established at Parramatta CC.

As illustrated in the figure, the comparative trend in re-conviction before February 2015 (that is, the pre-period) for the YKC and comparison groups diverge. As the trends do not appear to exhibit a common pattern over time, it is not possible to confidently attribute a change in re-conviction to the establishment of the YKC at Parramatta CC. Consequently, based on Figure A1, Aboriginal young people from the specialist CCs are not a valid comparison group for recidivism outcomes in the DiD model outlined in Equation 2.

Figure A1. Quarterly trends in recidivism for Aboriginal young people in the treatment and control groups, January 2010 to March 2019

