AssetPlus Outcome Evaluation

Final Report

Jack Cattell, Get the Data
Kasra Aghajani, Get the Data

Contents

Acknowledgements

Glossary

Asset	The assessment framework used in the youth justice system between 1999 and 2017, prior to AssetPlus.
AssetPlus	The current assessment framework used in youth justice system, implemented between October 2015 and August 2017.
Breach	A child's community order, conditional discharge, or licence on release from a Young Offenders Institution will have several conditions / requirements that he or she must observe. If he or she breaks those conditions, then the child is returned to court to be 'breached'. At this point no further action can be taken, extra conditions are attached, the order is suspended, or the child is re-sentenced. A child can also be found in breach of their bail conditions.
Case management system	The computer database used by a YOT to record all information relating to a child, their sentences and out of court disposals.
Community Order	A community order is a court sentence served in the community. The child is likely to have to comply with one or more requirements.
Concerns	A concern is identified and recorded in an AssetPlus assessment when there are any needs or problems in a child's life.
CSPPIs	A serious safeguarding incident is when a child on a YOT's caseload either dies, attempts suicide, is the victim of rape or sexual abuse, has sustained life threatening injuries, or has a permanent impairment of health or development. Public protection offences include murder, rape, terrorism, and MAPPA serious further offences. Collectively these events are known as CSPPIs – community safeguarding and public protection

incidents. If information is documented in AssetPlus and it facilitates better sharing of information about a child and improves case management, we would expect children to mitigate the risk of being involved in safeguarding incidents. The early identification of serious problems enables a YOT and wider partners to take preventative action.

Custody	A sentence where the child is imprisoned in either a Youth Offending Institute (YOI), a Secure Training Centre (STC) or a Secure Children's Home (SCH).
Onset	The assessment framework used with children at risk of entering the youth justice system between 2006 and 2017, prior to AssetPlus.
PSM	Propensity score matching, an evaluation method used to create similar intervention and control groups based on known variables.
Remand	When a child is waiting for their trial the court may request that they are remanded in custody until deemed ready for bail, found not guilty or sentenced. The child will stay in local authority accommodation or Youth Detention Accommodation during their remand. AssetPlus can provide more information to the court about a child's circumstances and potentially help the court to avoid unnecessary remand episodes.
YJAF	The Youth Justice Application Framework is an online platform for YOTs and the secure estate to communicate effectively, including through AssetPlus, and download documents and templates from the YJB.
YJB	Youth Justice Board, a non-departmental public body responsible for overseeing the youth justice system in England and Wales.
YOT	Youth Offending Teams are based in local authorities and are responsible for managing and supporting children who have received a court sentence or an out of court disposal. In some local authorities they are

called the Youth Justice Service (YJS) or Youth Offending Service (YOS).

Youth Caution   A youth caution is a police disposal given to children whose offence and offending history do not require a court sentence.

Executive summary

AssetPlus is the Youth Justice Board's (YJB) assessment and interventions planning framework and is based on a desistance-centred approach to youth justice, which aims to reduce offending behaviour.

Desistance theory emphasises an approach that encourages a child to stop offending, rather than focussing on the factors that led a child to start offending in the first place. This desistance-centred approach marks a shift from the 'risk' paradigm, which focuses primarily on understanding what causes a child to offend.

AssetPlus was introduced between 2015 and 2017, before the adoption of the Child First strategy in 2019 by the YJB.[1] It works within the context of the Child First strategy, but the crossover between the aims and methods of the Child First strategy and AssetPlus is imperfect.

AssetPlus uses an integrated assessment and planning process to create a record that follows a child through the youth justice system. The new assessment framework was implemented by 150 Youth Offending Teams (YOT) between October 2015 and August 2017.

Get the Data was commissioned by the YJB to estimate the impact of AssetPlus on a range of outcomes since its implementation.

Methodology

The YJB identified a short-list of outcomes that AssetPlus was expected to change, and a feasibility study[2] recommended that the following measures should be included in the outcome evaluation:

- **YOT operational efficiency:** time taken to complete assessments

---

[1] YJB (2019) *Strategic plan 2019-2022* (YJB: online publication)

[2] The feasibility study's recommendations are summarised in the technical report that accompanies this report.

- **Strengths and protective factors:** identification of speech, language and communication (SLC) needs, psychosocial outcomes for children, and individual factors
- **Behaviour change:** completion of supervision appointments and orders, number of order breaches, number of Community Safeguarding and Public Protection Incidents (CSPPIs), a custodial sentence following being placed on remand, and subsequent remand for a reoffence.

Three evaluation methods were used to estimate the impact of AssetPlus on these outcomes: historical controls, before and after comparisons, and case studies. A full description of the methodology, sample sizes, and evaluation methods, can be found in Appendix A.

YOT operational efficiency

AssetPlus was intended to decrease the time taken to complete an assessment, but the data showed that time taken increased over time. Practitioners were asked to record how long assessments took to complete at the initial implementation of AssetPlus, 12 months after implementation, and again after 18 months. The average times taken to complete initial assessments and review assessments increased when measured 12 months after implementation and were still higher 18 months after (for example, an initial assessment for a statutory case on average took 603 minutes at baseline, 710 minutes after 12 months and 947 minutes after 18 months).

Strengths and protective factors

Identification of concerns in the child's life was expected to decrease at follow-up assessments, but the data showed that the number of concerns increased with subsequent assessments. The increase in concerns was generally small, meaning most concerns were identified in the initial assessment.

The increase in concerns was more marked in children generally known to experience more vulnerable circumstances: offending before their 15th birthday and being a child that reoffends. This highlights the need to monitor and regularly review concerns for children from such groups.

Behaviour Change

AssetPlus was expected to increase compliance with orders and the data confirmed this. The analysis found a reduction in breach rates of approximately one percentage point (from 10.6% to 9.6%) due to AssetPlus.

No impacts from AssetPlus were found on community safeguarding and public protection incidents.

Whilst a reduction in remands to custody was an expected outcome, the evaluation found that the proportion of children remanded remained relatively stable.

Implications

The research results have the following implications:

- **This outcome evaluation of AssetPlus and its process evaluation provide evidence that the time taken to complete an AssetPlus is too long, and therefore its potential is not being realised**. This finding suggests that the YJB should work with the YOTs to train YOT workers to identify and limit assessment tasks for some children, while planning a full assessment for more vulnerable children.
- **This study did not find strong evidence that a child's concerns were being addressed when the AssetPlus assessment was used to guide sentence plans and tailor support**. The data available were limited to a maximum 12 month follow up, and it is reasonable to expect changes over a longer time frame than that. The YJB should consider reviewing changes across a longer timeframe but also in parallel ask YOT workers if they are observing changes over the longer term and are recording these in the assessment records they complete.
- **This study found evidence that AssetPlus had improved compliance with sentences and supervision.** This is important because motivation to comply should be an early outcome of AssetPlus. The impact of AssetPlus could be improved by a better understanding of what is specifically causing this and knowledge of how to maximise increases in motivation across all YOTs.
- **AssetPlus did not appear to change the use of remand by the court.** This was a priority outcome for AssetPlus and therefore the YJB should investigate what is stopping a reduction in remand. This could include asking magistrates and judges around their attitudes towards and understanding of AssetPlus, what evidence would assist their decision-

making, and how evidence from AssetPlus could be better communicated.

- **The evaluation identified significant data limitations when evaluating AssetPlus' outcomes.** The YJB should review these limitations to identify where future investment is required to provide outcome data for monitoring and evaluation. The capacity to robustly measure re-offending outcomes through PNC data should be a future YJB priority.

Background

This report estimates the impact of AssetPlus on a range of outcomes that encompass operational efficiencies, strengths and protective factors, and behaviour change. This background section describes the aims and content of AssetPlus, its expected outcomes, and the key findings of its process evaluation.

AssetPlus

AssetPlus is the Youth Justice Board's (YJB) assessment and interventions planning framework. It replaced Asset, which assigned scores to children on a range of risk and protective factors associated with youth offending. It helped practitioners in planning how to address those factors, but also encouraged users to place too much emphasis on a single factor's score, and the scoring system was sometimes confusing.[3]

In contrast, AssetPlus provides a more holistic approach through an integrated assessment and planning process. The aim of the framework was to balance risk, need, and strengths-based factors in an assessment record that follows a child through their interactions with the youth justice system.

The new assessment tool incorporates the lessons learned from Asset and Onset[4], new insights from research and academic literature, and general updates to youth offending management practice. The AssetPlus rationale document[5] describes several foundations for the new assessment framework. These include:

- **Understanding children's behaviour**: previous assessment tools identified a child's risk and protective factors in isolation, whereas these

---

[3] Baker, K. (2014) AssetPlus Rationale (YJB: Online publication)

[4] Onset was a similar assessment tool to Asset, used with children who were at risk of entering the youth justice system. Please see https://www.gov.uk/government/publications/onset-documents

[5] Baker, K. (2014) AssetPlus Rationale (YJB: Online publication)

factors interact with each other in varying ways depending on the context.

- **Understanding and using the concept of 'risk'**: the assessment aims to balance risk with a child's needs, goals, and strengths.

- **Identifying strengths**: the assessment aims to identify the existing and potential strengths of a child. The intervention plan should state how these will be developed during a sentence.

- **Desistance and process of change**: the assessment records "desistance-readiness" and aims to understand the child's perspective on the change process: hopes, fears, costs, benefits, and barriers.

- **Involvement of children and parents/carers**: the views of children and parents/carers are thoroughly considered when developing and updating the assessment and the intervention plans.

AssetPlus is recorded on a Youth Offending Team's (YOT) case management system. Practitioners can, therefore, review and update the assessment at any time. There are, however, important stages at which an assessment should be reviewed: pre-sentence if the child is likely to be remanded into custody or receive a custodial sentence; post court (where the assessment is completed near the beginning of the sentence); and at transition points, such as at release from custody or the child is transferred between YOTs. AssetPlus contains additional modules for referring to restorative justice, community agencies, and services within secure establishments.[6] Users are encouraged to use their professional judgement on the relevance of the assessment modules to adapt to each child's specific circumstances.

The new assessment framework was implemented in 150 YOTs between October 2015 and August 2017. Each YOT received approximately one month of training before the official roll out date.[7] By the end of June 2019, 41,940 children had received an AssetPlus assessment (for whom 128,536 updates of AssetPlus were completed). Since April 2019, AssetPlus is required for any

---

[6] Please see the AssetPlus Model Document:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/364092/AssetPlus_Model_Document_1_1_October_2014.pdf

[7] Please see the AssetPlus deployment list:
https://www.gov.uk/government/publications/assetplus-assessment-and-planning-in-the-youth-justice-system

child sentenced to a community-based order or a custodial order, and its use is optional for other children[8].

Expected outcomes of AssetPlus

The new assessment framework was expected to influence a broad range of outcomes through a better understanding of the children who are assessed, and the new working practices that it introduced. Expected outcomes fell into three broad categories:

1. Improvements in YOT operational efficiency.
2. Promotion of changes in children's strengths and protective factors.
3. A consequent improvement in child behaviour.

YOT operational efficiency improvements: The implementation of AssetPlus aimed to improve operational efficiency in the YOTs so practitioners could spend more time with children.[9] Guidance to YOTs recommended a proportionate use of AssetPlus, where time spent is reflective of the complexity and severity of each case, including the child's personal circumstances and behaviour.[10] The expectation was that overall time spent completing assessments would reduce. Completing an AssetPlus meant supporting the involvement of the child to self-assess their own needs, understanding their circumstances, recording that information and agreeing an intervention plan on a case management system. Practitioners were expected to consult with partner agencies and develop improved working relationships with the judiciary and court officers. As a result of these expected outcomes, relationships between YOT practitioners and children and their parents/guardians were also expected to improve.

Promotion of strengths and protective factors: The AssetPlus assessment was designed to improve the identification of a child's strengths and protective factors. The AssetPlus framework emphasises the need to balance risk alongside consideration of the child's needs, goals and strengths. AssetPlus should generate better intervention plans that reduce risk and promote

---

[8] YJB (2019) *Standards for children in the youth justice system 2019* (YJB: online publication)

[9] Picken et al. (2019) *Process Evaluation of AssetPlus* (Rand Europe: Online publication)

[10] To achieve that YOT staff would spend more time completing assessments for statutory and preventative cases, and less time on assessments for less serious cases such as out of court disposals.

protective factors. In practice, the assessor is expected to describe a child's circumstances and mark concerns for a range of psychosocial factors.[11] A concern is present when there are any needs or problems in a child's life. It is unlikely that all concerns and strengths will be identified in a first assessment for all children, but the expectation was that most concerns and strengths would be identified and addressed in that first assessment. Others may only become apparent as a relationship is being formed with the child.

Behaviour change: AssetPlus is expected to change a child's behaviours and prevent negative outcomes such as breaches, remands, and serious incidents. If a sentence is better tailored to meet the needs of the child, then it might be expected that they will comply with supervision contacts and attend interventions. When a YOT worker has a comprehensive understanding of a child's circumstances through AssetPlus, the rationale is that the potential for CSPPIs should be reduced.[12]

Court magistrates and judges were also expected to behave differently because of the introduction of AssetPlus. Through being informed of a child's circumstances in greater clarity and detail, the magistrates and judges were expected to choose remand in fewer cases.

Ultimately, all these positive changes should reduce the likelihood of a child reoffending. AssetPlus was introduced before the YJB's recent Child First strategy[13], but the rationale behind AssetPlus promotes (though not perfectly) a Child First approach in the way children's needs and priorities are recognised, their strengths and capacities are promoted, and their social inclusion is encouraged. This is explored further in the discussion chapter.

AssetPlus Process Evaluation

The YJB commissioned a process evaluation of AssetPlus in 2019 to understand how the framework had been implemented and whether its outcomes could be achieved.[14] It found that practitioners liked the ideas

---

[11] See the findings section page 21 for further details of those factors.

[12] Baker, K. (2014) *AssetPlus Rationale* (YJB: Online publication)

[13] YJB (2021) *YJB Strategic Plan 2021-24* (YJB: Online publication), pp. 10-14

[14] Picken et al. (2019) *Process Evaluation of AssetPlus* (YIJ: Online publication), pp. 5

underpinning AssetPlus but felt its benefits may not be realised. Findings of note were that:

- AssetPlus was not always used in a proportionate way that reflected the needs of children; too much time was taken assessing low risk and low vulnerability children.
- Practitioners found that AssetPlus was difficult to navigate.
- The introduction of AssetPlus had positive and negative effects on assessment quality and intervention plans.
- Practitioners identified challenges with using AssetPlus to develop pre-sentence reports (PSRs).
- Practitioners found inter-YOT working and working with Young Offenders Institutions (YOIs) difficult.

The process evaluation concluded that:

> "*key areas for improvement remain in order to ensure that the potential benefits of the strengths-based holistic assessment are realised. These include improving the [case management system] user interface, facilitating the easier sharing of information between professionals, and providing additional training to enhance practitioners' analysis skills and understanding of how to avoid duplication and ensure proportionate use of the AssetPlus framework.*"[15]

The findings and discussion chapters build on these findings where appropriate.

---

[15] Picken et al (2019 *Process Evaluation of AssetPlus* (YIJ: Online publication), pp. 5

Approach

This section describes the approach of the evaluation. It first describes the aim of the evaluation, then outlines the outcomes evaluated, and finally explains the study designs used to estimate impact. Appendix A provides a full description of the methodology employed, and the accompanying technical report describes the specifications and outputs of the statistical models.

Evaluation aim

The YJB required the outcome evaluation to assess the impact of AssetPlus against a range of outcomes. To do this, the YJB asked the evaluation team to investigate 18 potential outcome measures. A feasibility study found that impacts could be estimated for eight outcomes, which are the focus of this report.

The results of the feasibility study are summarised in the technical report.

Outcomes were generally not included in the outcome evaluation either because the data that would reflect the outcomes could not be captured within AssetPlus, or because sample sizes were too small to provide rigorous analysis. The available control groups were taken from a period when the Asset assessment was used which could limit the potential impact of AssetPlus.

Evaluation outcomes

The outcome measures used in this outcome evaluation report are listed in Table 1.

Table 1: AssetPlus evaluation outcome measures

	Outcome	Expected outcome
YOT operational efficiency	Time taken to complete an AssetPlus assessment.	Time taken to complete an all types of AssetPlus assessment reduces.
Strengths and protective factors	Number of speech, language and communication (SLC) concerns.	Number of children with an SLC is accurately identified after the introduction of AssetPlus.
	Number of recorded concerns in the child's life.	Number of concerns reduces after the introduction of AssetPlus.
Behaviour change	Rate of breaches.	The breach rate would reduce after the introduction of AssetPlus.
	Compliance with orders.	The order compliance rate increases after the introduction of AssetPlus.
	Compliance with face-to-face contacts.	The proportion of children who miss at least one face to face contacts reduces.
	Rate of community safeguarding events.	The proportion of children who are part of a community safeguarding event reduces after the introduction of AssetPlus.
	Rate of public protection incidents.	The proportion of children who are part of a public protection incident reduces after the introduction of AssetPlus.
	Custodial sentence rate after remand.	The rate of custodial sentences after remand increases after the introduction of AssetPlus.
	Use of remand for subsequent offences.	The rate of remand is lower for subsequent offences, after the introduction of AssetPlus.

Appendix A describes the data used for each outcome measure. Not all of the YJB's expected outcomes for AssetPlus could be measured from available data, including reoffending. This limited what can be concluded in this report.

Study designs

Three impact evaluation study designs were required to estimate the impacts on the eight outcomes listed above:

1. Historical control
2. Before and after
3. Case study historical controls

Appendix A describes each study design in full, setting out the design choices made and the limitations of the methods. The choice of these designs is discussed in the technical report.

Historical control

The historical control evaluation is a quasi-experimental design where children who were assessed using AssetPlus are compared to similar children who started their order before the introduction of AssetPlus. The evaluation team constructed the historical control group using propensity score matching (PSM). This uses a range of known criteria to match children in a control group to those in the intervention group (i.e. those that received an AssetPlus).

AssetPlus' impact on remands, breaches and CSPPIs were estimated using this approach. One sample was used to estimate impacts on breaches and safeguarding incidents, and two samples were used to estimate impacts on remand: for subsequent offences and whether remand was used appropriately. The sample sizes are described in Table 3.

Table 2: Sample definitions and sizes

Outcomes	Intervention (n)	Control (n)
Breaches and safeguarding	10,533	18,808
Subsequent use of remand	8,528	13,762
Appropriate use of remand	225	895

Source: YJB YJAF data and AssetPlus assessments

AssetPlus' effect sizes were tested using the McNemar chi-squared test for matched data. The results and their significance are reported in the findings.

Before and after

Before and after impact designs estimate impact by comparing outcomes before an intervention with those measured afterwards. The before and after design was used for two data sources: a survey of YOTs and AssetPlus assessment data. These sources measured two outcomes: time to complete an assessment and changes in strengths and needs.

The YJB surveyed the YOTs' perceptions of how long it takes to complete an AssetPlus assessment across three waves (wave 1 n=77, wave 2 n=31, wave 3 n=28). Only five YOTs responded to all three waves. The analysis in the findings chapter, therefore, presents all returns and is not filtered to the YOTs that responded to all three waves.

Practitioners record in AssetPlus whether they are concerned about a child's circumstances using binary yes/no responses[16]. To estimate changes in concerns the sample was restricted to:

- children who had a baseline AssetPlus within 90 days of their first commencement after the introduction of AssetPlus[17]; and
- at least one follow-up AssetPlus assessment within 12 months after their initial AssetPlus assessment.

This resulted in a sample of 11,371 children with AssetPlus assessments.

In both cases, mixed-effect models for unbalanced and balanced data were used to estimate the impact of AssetPlus. The findings section reports statistically significant findings at 95% confidence[18] from the models but not the associated p-values. Any non-significant results are stated as such in the findings chapter.

Case studies

Compliance data – such as attendance at supervision sessions – were collected from nine case study YOTs. These nine were selected to represent different policy contexts and geographies. The data collected from the YOTs were

---

[16] Please see Appendix A for list of the concerns that are recorded.

[17] The sample was limited to the first conviction to prevent contamination.

[18] $\alpha <= 0.05$

matched with records held by the YJB, and then by using PSM, a final sample size of 1,964 children was achieved (651 – out of an original sample of 739 – in the AssetPlus group, and 1,313 in the control group). To estimate attendance at supervision, the PSM process was repeated for children who had a least one contact planned in months 1, 2, and 3 of their community order / release from custody.

The case study results were tested using McNemar tests for dichotomous variables and dependent data. The results and their significance are reported in the findings.

Findings

This chapter describes the findings of the AssetPlus outcome evaluation. It follows the broad categories of outcomes listed in the background chapter and includes the following sections:

- **YOT operational efficiency**: this section describes changes in the YOTs' perceptions of the time taken to complete an AssetPlus;
- **Strengths and protective factors**: this section describes the concerns reported in AssetPlus; and
- **Behaviour change**: this section describes the estimated impact of AssetPlus on children's behaviours, such as compliance and remand.

YOT operational efficiency

AssetPlus was expected to reduce the time spent on assessments, especially out of court disposals, but the time required to complete an assessment increased over time.

The YOTs were asked to estimate the time spent (in minutes) to complete an initial and follow-up assessment. The baseline measure is the time taken to complete an AssetPlus assessment soon after its implementation.[19] Figure 1 describes the average time taken to complete an initial AssetPlus assessment at baseline and at 12 and 18 months later.

---

[19] Unfortunately, data to describe the time it took to complete an Asset (the previous framework) assessment were unavailable.

Figure 1: Average time taken to complete an initial AssetPlus assessment at baseline and 12 & 18 months later (mins)
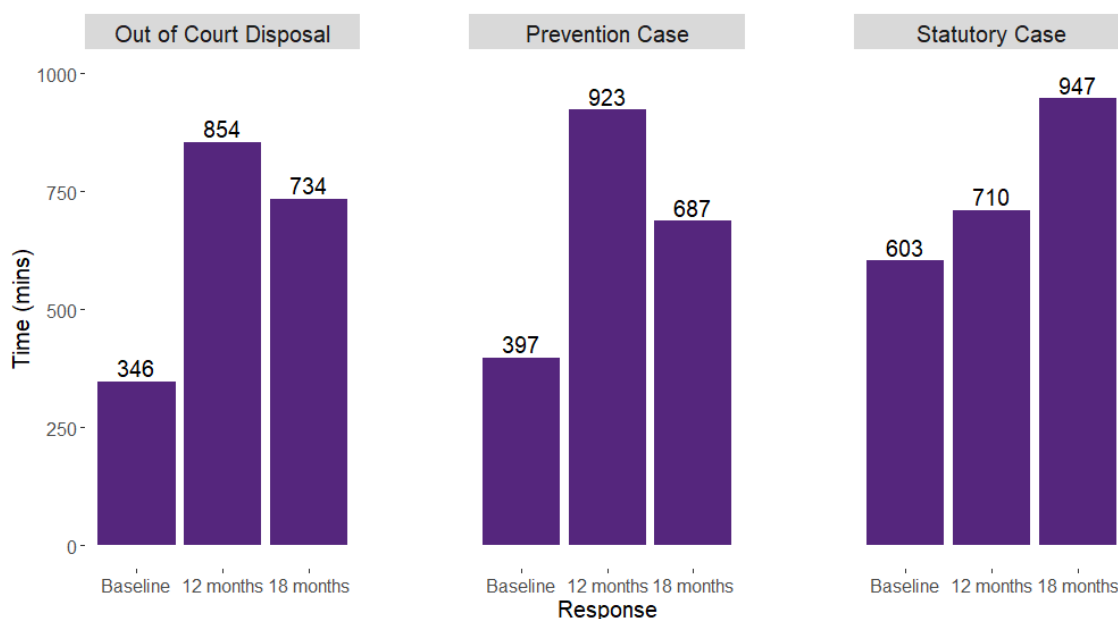
Base: Out of court disposal – Baseline n=52, 12 months n=22, 18 months n=17; Prevention case – Baseline n=32, 12 months, n=18, 18 months n=11; Statutory case – Baseline n=71, 12 months n=29, 18 months n=23
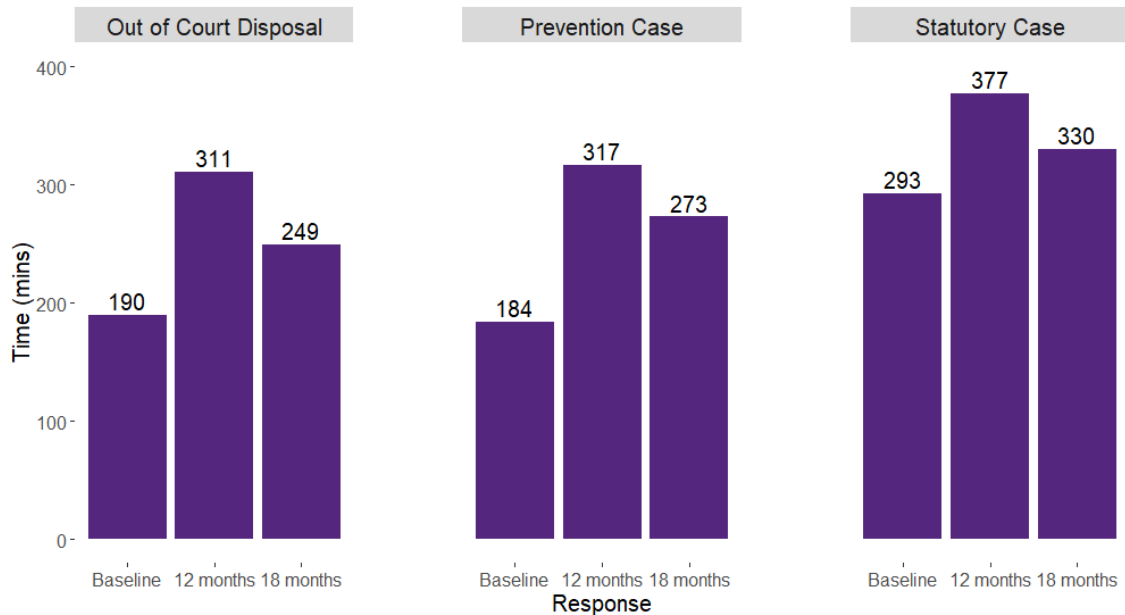
Source: YJB Assessment and Quality Planning Review

The reported time to complete an initial assessment for a statutory case increased over time and this increase was statistically significant. At baseline, the YOTs reported that it took on average 603 minutes (over 10 hours) (n=71) to complete the assessment, increasing to 710 minutes after 12 months (n=29), and 947 minutes (over 15 hours) (n=23) after 18 months. The reported time also significantly increased for prevention cases and out of court disposals (OOCD), but the time at 18 months was lower than at 12 months. For example, for a preventative case the YOTs reported spending 397 minutes (n=45) on average at baseline, 923 minutes (n=21) after 12 months and 687 minutes (n=17) after 18 months.[20]

After 18 months, the difference in the average time to complete an initial assessment for an OOCD (734 minutes), preventative (687 minutes) and statutory case (947 minutes) remained relatively small.

---

[20] The times taken at 12 and 18 months were statistically significantly greater than the baseline time.

Figure 2 describes the average time taken to complete a review assessment for out of court disposals, preventative cases, and statutory cases.

In each case, the reported time increased over time, although the average length of time was less after 18 months than after 12 months. All times at 12 and 18 months were statistically significantly greater than those recorded at the baseline. For a statutory case the average time rose from 293 minutes (nearly 5 hours) (n=69) at baseline to 377 minutes (n=29) at 12 months, before reducing to 330 minutes (n=23) at 18 months. The estimated times for preventive cases and OOCDs followed a similar pattern., Statutory case reviews generally took longer than OOCD reviews and preventative case reviews, although the difference was relatively small (81 minutes)

The process evaluation reported that the time required to complete AssetPlus assessments was often disproportionate to the risk and need of a case, and practitioners appeared to struggle to adapt AssetPlus in a proportionate way for children who had little contact with the YOT. The 12 month and 18 month survey results corroborate these findings, although at baseline the YOTs reported a shorter time to complete an AssetPlus assessments.

Overall, less time was spent on out of court cases but the differences with the other case types were small.

The YOTs estimated the time it took to complete a bail recommendation.

Unlike the previous examples, the estimated time to complete bail recommendations did not increase after 12 months. At baseline the average time taken was 165 minutes (n=58), compared to 166 minutes (n=22) at 12 months and 219 minutes (n=17) at 18 months. This result was not statistically significant, and the increase might be due solely to the low response rate at 18 months.

Strengths and protective factors

This section first describes the recording of speech, language, and communication (SLC) concerns, identified as a priority outcome measure. It then describes the changes in concerns about a child's life that are reported in the AssetPlus assessment.

Identification of speech, language, and communication (SLC) concerns

> The AssetPlus assessment introduced the identification of SLC concerns and overall, 57% of children had an SLC concern, which was consistent with other research studies.

Having a communication difficulty can result in a child either engaging in crime (e.g. being misunderstood can lead to a violent situation) or being more likely to be arrested (e.g. poor communication with a police officer can lead to a situation where an arrest is made).[21] The Asset (the previous framework) assessment did not record SLC difficulties, so AssetPlus provided a new measure of its prevalence, in addition to any previous actions taken by individual YOTs (e.g. staff training by the Royal College of Speech and Language Therapists).[22]

---

[21] Coles, H., Gillett, K., Murray, G., and Turner K. (2017) *The Royal College of Speech and Language Therapists: Justice Evidence Base* (Royal College of Speech and Language Therapists: Online publication), pp. 10-16

[22] RCSPLT (2017) *Justice Evidence Base* (RCSLT: Online publication)

Fifty-seven percent (n=11,373) of children had a concern raised about their speech, language, or communication skills in their first AssetPlus assessment.[23] This result is consistent with previous research in England and Wales that estimates that 60% of children supported by YOTs have a SLC need.[24]

The analysis found that younger children, those who had a previous court sentence, and those who committed less serious offences, were all more likely to have a SLC concern recorded in AssetPlus:

- Sixty eight percent of 10- to 13-year-olds (n=2,146) had a SLC concern recorded compared with 60% of 14- and 15-year-olds (n=4,495) and 52% of 16- and 17-year-olds (n=4,665).
- Sixty four percent of children who had at least one previous court order (n=1,667) had a SLC concern recorded, compared with 56% of children who had no previous court orders (n=9,639).
- Fifty nine percent of children whose offence had a low seriousness score (2 or lower, n=3,382) had a SLC concern recorded, compared with 57% of the remaining children (n=7,924).

The study team extended the analysis to follow-up assessments of SLC. A majority, 59% (n=6,709), had a SLC concern recorded at the baseline, and this increased by 1% at the follow-up. Certain children were more likely to have a concern reported at both the baseline and follow-up stages.

At the baseline assessment, 66% of children (n=639) with a caution had a communication concern recorded, compared with 58% of children with a conditional caution (n=1,605). The proportion of children with a custodial sentence who had an SLC concern recorded decreased from 60% (n=63) to 57% (n=60) between the baseline and follow-up assessments.

---

[23] The sample is first assessments within 90 days of a child's first commencement after the introduction of AssetPlus in a YOT; n= 19,821; Sample covers November 2015 to June 2019

[24] Bryan, K. (2004) "Preliminary study of the prevalence of speech and language difficulties in young offenders" in *International Journal of Language and Communication Disorders*, 39, pp. 391-400; Bryan, k., Freer, J. and Furlong, C. (2007) "Language and communication difficulties in juvenile offenders" in in *International Journal of Language and Communication Disorders*, 42, pp. 505-520; and Gregory, J. and Bryan, K. (2011) "Speech and language therapy intervention with a group of persistent and prolific young offenders in a non-custodial setting with previously undiagnosed speech, language and communication difficulties" in *International Journal of Language and Communication Disorders*, 46, pp. 202-215

Children who had more than two assessments completed within the first 12 months of their sentence were more likely to have a SLC concern recorded on their baseline assessment, compared with those with just two assessments. In each of the examples provided in Figure 3, the proportion with a recorded SLC need increased at the follow-up assessment.

Figure 3: Proportion of children with a SLC need at baseline and follow-up by the number of assessments completed within 12 months of their commencement (%)
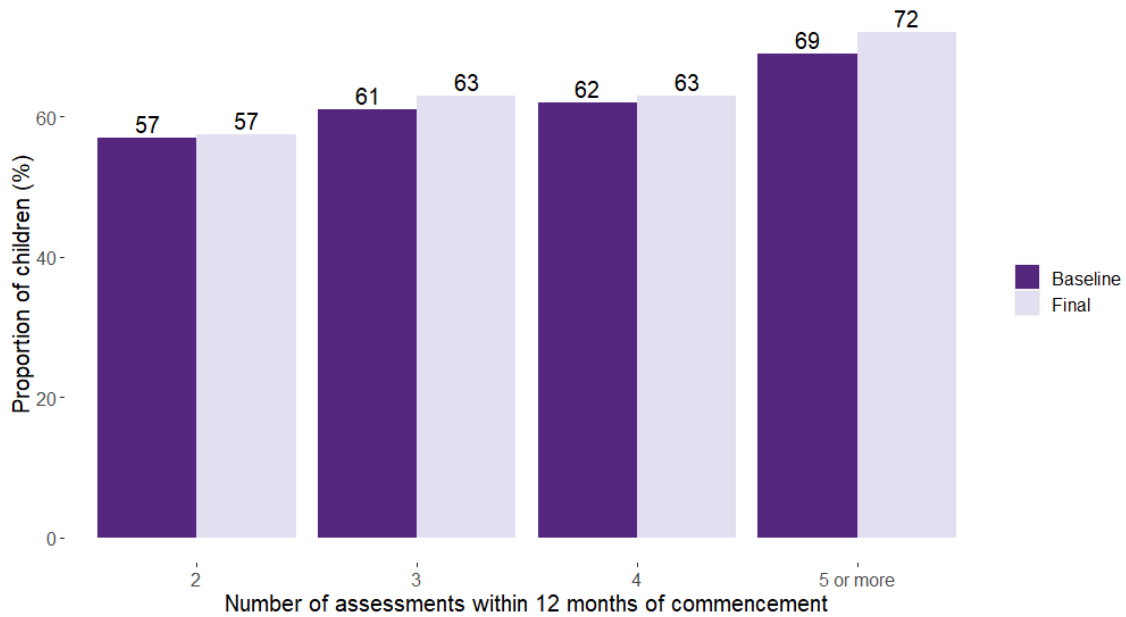
Base: 2 –n=145; 3 –n=2,930; 4 –n=1,271; 5 or more –n=1,025

Source: AssetPlus assessment data

Sixty nine percent of children who had five or more assessments had a communication concern recorded at the baseline. This increased to 72% at the follow-up assessment. This compares with 57% of children who had two assessments completed. This suggests SLC needs are more prevalent when the child has multiple assessments.

As noted earlier, the youngest children were more likely to have a SLC concern recorded in the baseline assessment. The proportion of the youngest children who had a concern recorded did not change substantially in the follow-up assessment. For example, 70% (n=724) of 13-year-olds had a concern recorded at baseline which rose to 73% (n=755) in the follow-up. The proportion of older children with a SLC concern did increase at the follow up assessment. In fact, the odds that a child had a SLC concern in the follow-up assessment

increased by 38% with each year of age. This might suggest difficulties with detecting SLC concerns in some older children at the first assessment.

Number of concerns recorded in the assessments

> The AssetPlus assessment was expected to help users identify and promote children's strengths and protective factors. Conversely, users of the assessment found, over time, more concerns that could prevent the promotion of strengths and protective factors. The increase was small and varied by different child groups.

The AssetPlus assessment records whether the practitioner had concerns with a further 17 factors in a child's life.[25] These can be placed into two groups: contextual factors (such as accommodation status), and individual factors (such as attitudes to offending). The changes in each group are described below.

Contextual factors

There are six contextual factors assessed in AssetPlus: *accommodation status*, *care history*, *family behaviour*, *local issues*, *parenting*, and *significant relationships*.

Figure 4 describes the change in the proportion of children who had a concern with a factor recorded in the baseline or follow-up assessments.

---

[25] The AssetPlus assessment asks the user to record any concerns about a child's life that could prevent the promotion of his or her strengths and protective factors. These data do not directly measure a child's strengths and protective factors, but do measure if there are issues present that could prevent their promotion and they measure factors that are expected to be addressed during a sentence.
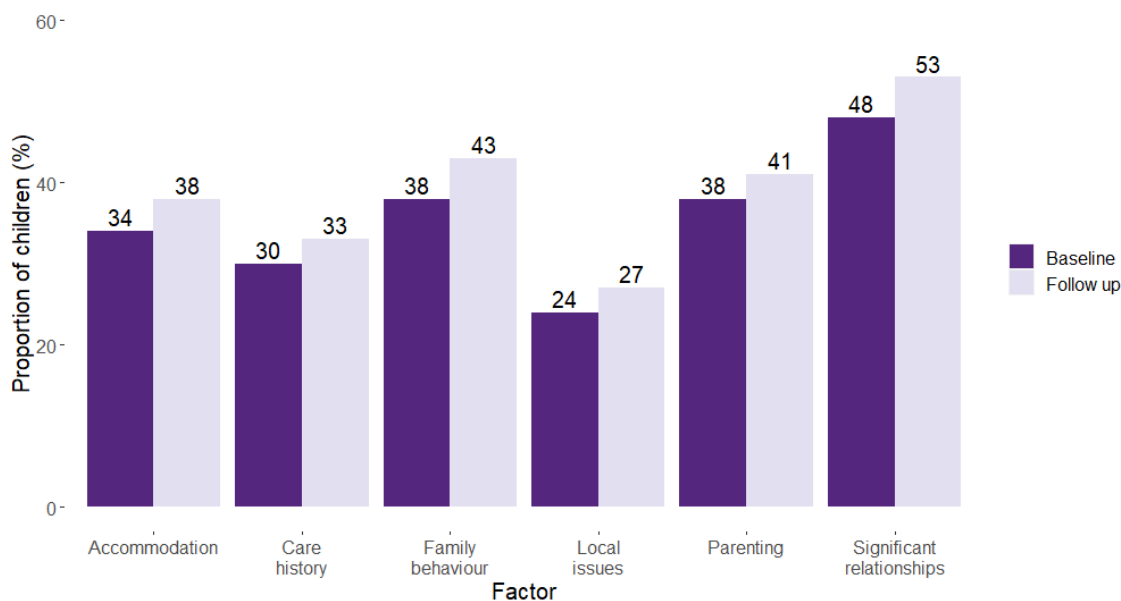
The proportion of children with a reported concern slightly increased for all factors at the follow-up assessment. The largest increases were for two factors: "significant relationships" and "family behaviour". Both of those factors increased by five percentage points, and these two increases were statistically significant (the remainder were not).

Across all factors, children who had multiple AssetPlus reviews were more likely to have a concern recorded at the follow-up assessment. For example, a higher proportion of children with more than two assessments had an *accommodation* concern recorded at the baseline assessment: 45% (n=461) of children with five or more assessments compared with 31% (n=1,905) of children with two assessments. The proportion with this concern grew at the follow-up assessment for all children, but the increases were largest for those with four or more assessments: a 7 percentage point increase for those with four assessments and a 13% point increase for those with five or more assessments.

Across the six contextual factors, different types of children had statistically significant changes by the follow-up assessment. These changes are summarised in Appendix B. For example, after a period of use, new

accommodation concerns were more likely to be recorded in AssetPlus for boys, older children, and any child who did not receive a caution. In contrast, significant relationship concerns were likely to be removed for older children, and for children who did not receive a caution. The additional impact of AssetPlus was that:

- "*Family behaviour*" concerns were more likely to be recorded for children with more previous convictions.
- New "*parenting*" concerns were more likely to be recorded for boys.
- New "*local issues*" concerns were more likely to be recorded for boys and children who received a custodial sentence, but "*local issues*" concerns were more likely to be removed for children with previous convictions.

Individual factors

There are 11 individual factors assessed in AssetPlus. Figure 5 describes the change in the proportion of children who had a concern with one of these factors recorded in the baseline or follow-up assessments.

Figure 5: Proportion of children with an individual factor concern at baseline and follow-up (%)
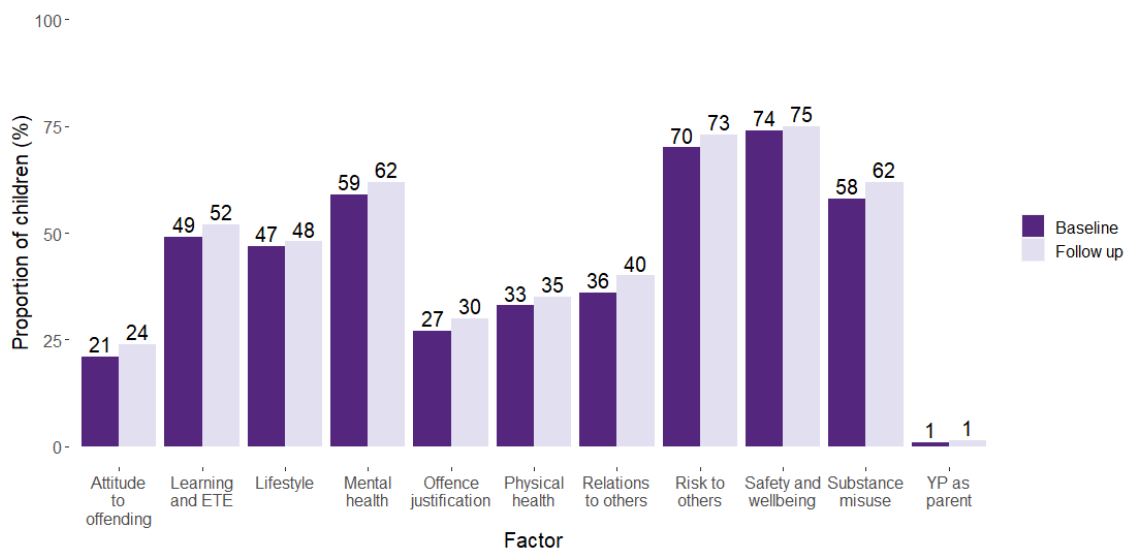
Again, there were slight increases in all factors, but only two increases were statistically significant. The largest increases were in *substance misuse* (58% to 62%) and *relations to others* (36% to 40%). The results from the mixed effects models indicate that the statistically significant increases were in the concerns

physical health (33% to 35%) and *risk to others* (70% to 73%). Despite recording increases, the modelling results suggested that the proportions for the following concerns were generally lower than expected (given the sample of children) in the following concerns: *attitudes to offending*, *lifestyle*, *offence justification*, *safety and wellbeing*, and *young person as parent*.

As with the contextual concerns, the analysis investigated if decrease and increase in concerns at the follow-up assessment were different for different children. This highlights any children of greater concern or where the support derived from AssetPlus is helping to improve children's outcomes. The following changes in concerns at the follow-up stage for different child characteristics were of note:

- *"Attitude to offending"* concerns increased for children on non-custodial sentences, suggesting increased likelihood of engaging in offending behaviour when supported in the community.
- *"Risk posed to others"* concerns decreased for older children, those with a higher number of convictions, and all sentence types.
- "*Mental health*" concerns decreased across custodial and community orders, suggesting that the observed increase was due to other factors and the support received could be helping.
- *"safety and wellbeing"* concerns increased for younger children, and for children with a higher number of previous convictions, suggesting an important vulnerability was either being missed at the first assessment or began during the YOT support period for these two more vulnerable groups of children.

The increases and decreases in concerns found in the data modelling exercise are summarised in Table 6 in Appendix B.

Behaviour changes

This section describes the estimated impact of AssetPlus on the following outcome measures: compliance; CSPPIs; and remands to custody.

Compliance

The AssetPlus assessment was expected to increase compliance with orders and the analysis results suggested that had happened. The breach

> rate for children assessed using AssetPlus was 1 percentage point lower than in a control group (9.6% to 10.6%) and children who were assessed using AssetPlus were less likely to miss a face to face contact.

AssetPlus was expected to improve compliance in three ways: breaches would be lower; children would be more likely to complete their order; and children would be more likely to comply with their supervision.

Rate of order breaches

When a child fails to comply with the conditions of their community or custodial order, they will have breached. The AssetPlus framework is intended to improve compliance and therefore to reduce breaches, and the findings suggest that a reduction in breaches did occur after the introduction of AssetPlus.

The AssetPlus breach rate was one percentage point lower than the control group's rate (9.6% to 10.6% respectively), and the difference was statistically significant.[26] Children in the AssetPlus group with a community order had a breach rate of 15.6% compared with 19.8% of children in the control group (a difference of 4.2 percentage points). For the remaining sentences, a slightly higher proportion of AssetPlus children breached compared with the control group (11.2% to 10.6%).[27]

To put these results in context, in the year to March 2015 (before the introduction of AssetPlus) there were 4,053 breaches[28]. In each subsequent year, while AssetPlus was being introduced, the number of breaches dropped.

Order completion

Order completion was estimated using the case study data. Children in the AssetPlus group were more likely to complete successfully their order than their counterparts in the control group. The completion rate for those in the AssetPlus group was 76% (n=651), compared to 68% (n=1,313) in the control group.

---

[26] McNemar's chi-squared = 10.197, p-value < 0.01

[27] The sentence type findings are indicative because the propensity score matching procedure was not completed for these subgroups. The intervention and control group samples may therefore be uneven.

[28] YJB (2020) *Youth Justice Statistics 2018/19 England and Wales* (YJB: online publication)

Compliance with face-to-face contacts

Compliance with contacts was also estimated using the case study data. Children in the AssetPlus group were less likely to record non-compliance (defined as having missed at least one contact) with a face-to-face contact within three months of starting their sentence. While the non-compliance rates were similar between the two groups for the first two months, there was a statistically significant difference in non-compliance rates between the AssetPlus and control group at month three. Thirty-seven percent of children in the AssetPlus group had at least one missed contact at month three, compared with 43% in the control group. Figure 6 illustrates these findings.

Figure 6: Non-compliance rate for face-to-face supervisions (%)
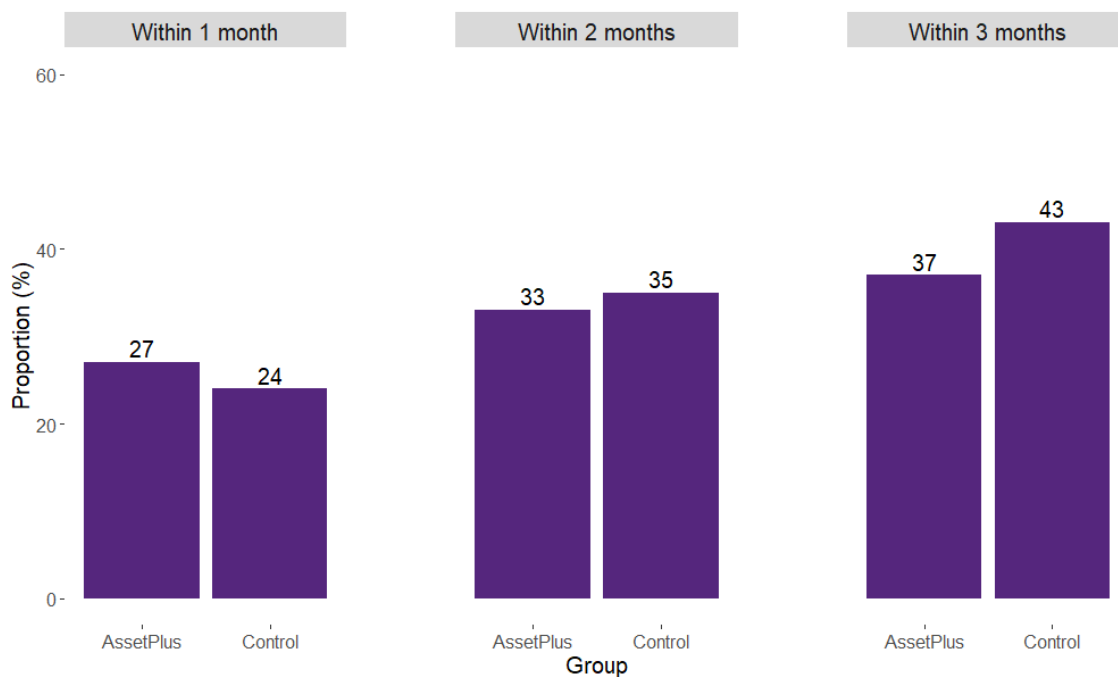
Base: Within 1 month - AssetPlus n=545, Control n=872; Within 2 months – AssetPlus n=544, Control n=870; Within 3 months – AssetPlus n=543, Control n=864

Source: 9 case study YOTs administrative data

Rate of community safeguarding and public protection incidents (CSPPIs)

> AssetPlus was expected to reduce CSPPIs but the analysis suggests there was no change in the rate of CSPPIs after the introduction of AssetPlus.

AssetPlus was expected to reduce the use of CSPPIs because it should highlight the likelihood of a safeguarding incident occurring earlier. The findings, however, suggest that AssetPlus cannot be said to reduce the number of CSPPIs.

Out of the 10,531 children in the AssetPlus intervention group, 0.3% (n=33) were involved in a CSPPI in the 12 months either after their order commenced or after their release from the secure estate. The corresponding figure for the control group was 0.4% (n=67). The difference between the two groups' CSPPI rates was not significant.[29]

The analysis was extended to estimating the impact of AssetPlus on only safeguarding incidents. Twenty-three young people (0.2%) who received an AssetPlus assessment were involved in a safeguarding incident. This compares with 0.3% of the control group. This difference (0.06%), however, was not significant.[30]

The results, however, were realised in a context of increasing numbers of CSPPIs. In the year ending March 2018, there were 221 CSPPIs reported to the YJB from a caseload of approximately 27,000[31]. This was an increase on the 197 and 163 reported in 2016 and 2017 respectively.[32]

Custodial remands

> The availability of the AssetPlus assessment's information was expected to encourage the court to use remand less often. The analysis suggests the court did not use remand less after the introduction of AssetPlus.

The AssetPlus framework is intended to reduce the use of remand. In the year ending March 2019, the court ordered 1,221 remands to youth detention accommodation, and the number of remands has stayed relatively constant since 2014. The impact of AssetPlus on remand was estimated in two ways: its

---

[29] McNemar's chi squared = 0.40476, p-value = 0.5246

[30] McNemar's chi squared = 1.0364, p-value = 0.3087

[31] YJB (2019) *Youth Justice Statistics 2017/18 England and Wales* (YJB: online publication)

[32] Ibid

impact on the appropriate use of remand, and its impact on the use of remand for any subsequent offences.

Rate of custodial sentences after remand

If AssetPlus prevented unnecessary remands, then we would expect the children who are remanded to be more likely to receive a subsequent custodial sentence (i.e., those that would not receive a custodial sentence are not remanded in the first place). The findings suggest, however, that this did not happen.

A sample of children who received an AssetPlus assessment before their final court hearing was compared to a control group. The AssetPlus children's custodial rate after being on remand was 44.9% (n=225), compared to the control group's rate of 46.5% (n=895). This difference was not statistically significant.[33]

Remand for subsequent offences

If a child reoffends after they receive an AssetPlus assessment and consequently attends a court hearing, then the court can refer to the assessment when deciding whether to remand the child to custody. As such, unnecessary remands could be avoided, but as with the result above, the findings suggest that AssetPlus cannot be said to prevent remand for subsequent offences.

The study team identified the children who received an AssetPlus assessment and who attended a court hearing within 12 months after their sentence commenced or their release from an institution. These were matched to similar children who did not receive an AssetPlus assessment. The 12 months remand rate[34] was 5.1% for the AssetPlus group compared to 5.2% in the control group. The difference was not statistically significant.[35]

Summary of Findings

Table 4 summaries the findings discussed in this chapter. It maps the expected outcomes listed in Table 1 to the key finding.

---

[33] McNemar's chi-squared = 0.536, p-value = 0.464

[34] Measured from the commencement of their sentence / release from institute.

[35] McNemar's chi-squared = 0.059, p-value = 0.81

Table 3: Summary of findings

Outcome		Expected outcome	Key findings
YOT operational efficiency	Time taken to complete an AssetPlus assessment.	Time taken to complete an all types of AssetPlus assessment reduces.	The time to complete an initial and a review assessment increased over time.
Strengths and protective factors	Number of speech, language and communication (SLC) concerns.	Number of children with an SLC is accurately identified after the introduction of AssetPlus.	Number of children with an identified SLC is similar to other study's estimates.
	Number of recorded concerns in the child's life.	Number of concerns reduces after the introduction of AssetPlus.	The number of concerns increased within 12 months of a sentence/license starting.
Behaviour change	Rate of breaches.	The breach rate would reduce after the introduction of AssetPlus.	The study found a small but statistically significant reduction in the breach rate after the introduction of AssetPlus.
	Compliance with orders.	The order compliance rate increases after the introduction of AssetPlus.	The study found a statistically significant increase in the order compliance rate after the introduction of AssetPlus.
	Compliance with face-to-face contacts.	The proportion of children who miss at least one face to face contacts reduces.	The study found a statistically significant reduction in the proportion of children

Outcome		Expected outcome	Key findings
			who miss at least one face to face contact within 3 months of release or starting a community-based order.
	Rate of community safeguarding events.	The proportion of children who are part of a community safeguarding event reduces after the introduction of AssetPlus.	The study found no change in the community safeguarding rate after the introduction of AssetPlus.
	Rate of public protection incidents.	The proportion of children who are part of a public protection incident reduces after the introduction of AssetPlus.	The study found no change in the proportion of children who are part of a public protection incident after the introduction of AssetPlus.
	Custodial sentence rate after remand.	The rate of custodial sentences after remand increases after the introduction of AssetPlus.	The study found no change in the rate of custodial sentences after remand after the introduction of AssetPlus.
	Use of remand for subsequent offences.	The rate of remand is lower for subsequent offences, after the introduction of AssetPlus.	There was no change in the rate of remand for subsequent offences, after the introduction of AssetPlus.

Discussion

The AssetPlus assessment was considered a marked shift from the 'risk' paradigm, which focused primarily on understanding what caused a child to offend, to a form of youth justice underpinned by theories of desistance. Desistance theory emphasises an approach that encourages a child to stop offending, rather than focussing on the factors that made him or her start offending in the first place. The AssetPlus assessment, as set out in the background section, emphasises desistance-focused practice, which has been summarised in eight key principles[36]:

1. Recognition that the process is complex; can include setbacks; and positive changes might only be realised after a considerable time.
2. Recognition that one size fits all interventions and practices are not effective.
3. Supporting and nurturing a child's motivation and self-belief are key practitioner tasks.
4. Working *with* the child, rather than *on* the child.
5. Relationships between the practitioner and the child and their family are central to supporting change.
6. A focus on both the child and their personal and social circumstances.
7. Developing the child's strengths and resources, and those of the persons they are closest to.
8. Recognising the positive aspects of a child's potential, and not identifying them with the behaviours they want to leave behind.

Desistance is neither a quick or easy process, where relapses should be expected and managed. This process is separated into three important stages:[37]

---

[36] McNeill, F., Farrell, S., Lightowler, C., and Maruna, S. (2012) *How and why people stop offending* (University of Glasgow: Online publication)

[37] Maruna S and Farrall S (2004) "Desistance from crime: A theoretical reformulation" in *Kolner Zeitschrift fur Soziologie und Sozialpsychologie*, 43, pp. 171–194

McNeill F (2016) "Desistance and criminal justice in Scotland" in Croall H, Mooney G and Munro R (eds) *Crime, Justice and Society in Scotland* (Routledge: London), pp. 200–216

1. Primary desistance, where the person changes their behaviour and complies with their sentence and ceases offending.
2. Secondary desistance, where the person adopts a non-offending identity.
3. Tertiary desistance, where others recognise the person has changed, and he/she develops a sense of belonging.

Since the introduction of AssetPlus, the YJB has adopted a Child First strategy. The Strategic Plan 2021-2024 states that "the YJB's vision is for a youth justice system that treats children as children" and sets out its requirements for a Child First approach[38]:

- Prioritising the best interests of children and recognising their needs and potential.
- Promoting children's individual strengths and their capacities to develop pro-social identities.
- Encouraging children's active participation, engagement, and wider social inclusion.
- Promoting a childhood removed from the justice system.

The Child First strategy has a clear crossover with both the intentions of AssetPlus and desistance theory, although it has been identified that there is not a perfect crossover between the three.[39] For example, AssetPlus' documentation uses the language of risk (as well as strengths) and desistance theory's aim is to stop offending, whereas proponents of the Child First approach want to drop that goal as it could stifle a child's progress.

Below the findings from the previous chapter are discussed in the context of desistance theory and the Child First strategy.

YOT operational efficiency

The findings section describes how the reported time to complete an AssetPlus assessment increased 18 months after its introduction. The goal of AssetPlus was to move away from the Asset assessment, which was considered time consuming, to an ongoing assessment process that would free up time for working with the child. The introduction of AssetPlus, however, meant that

---

[38] YJB (2021) *Strategic plan 2021-2024* (YJB: online publication)

[39] Wigzell, A. (2021) *Explaining desistance: looking forward, not backwards* (NAYJ: online publication)

practitioners also needed to learn the new desistance-based practice that ran alongside the assessment.

The quantitative data were insufficient to explore the drivers of the increased time reported. The AssetPlus process evaluation found, however, that YOTs and practitioners took time to adopt the new practice. Similarly, a review of the introduction of desistance practice in YOTs in Wales found that practitioners were not able to apply successfully a desistance theory approach[40]. In neither case was this a result of resistance (in fact it was generally welcomed). Instead, as shown above, AssetPlus and the desistance theory are wide ranging new ideas that are likely to take time to introduce fully.

As staff have become more proficient in the application of AssetPlus it is possible they have identified more assessment tasks to complete and more information to review. It is also possible that scope creep occurred, where children (who historically were not expected to be assessed in-depth) were assessed.

If the process evaluation's lessons are used, it may be that the time taken to complete AssetPlus will reduce as desistance-based practice becomes instinctive.

Further research will however be required to establish the drivers of the increased time taken to complete AssetPlus.

Strengths and protective factors

The findings chapter explained that, as would be expected, a considerable number of concerns were identified in the AssetPlus assessment. The expectation was that these concerns would reduce at the follow-up assessment because the intervening period of support would address them. The result, however, was that the number of concerns reported had increased by the follow-up. Increases were generally small, meaning most concerns had been identified in the first AssetPlus assessment, but nevertheless, the expectation was that the change would be in the opposite direction. The measures do not state the intensity of the concern (i.e. they are binary measures), only if one

---

[40] Hampson, K.S. (2018) 'Desistance Approaches in Youth Justice – The Next Passing Fad or a Sea-Change for the Positive?', *Youth Justice,* vol 18, pp. 18-33

exists, so the data could miss reductions in importance. The result could partly be explained by how practitioners record results, where new concerns are routinely entered but records are not updated where a concern is no longer present. Such a consequence has been identified in adult assessments as well.[41] Further investigation is required to understand how the data are recorded and updated, and the role of the available technology within that.

The discussion has described that a change in strengths and needs may be slow, and, according to desistance theory, children will sometimes take backward steps as well as making positive progress. The data allowed assessment follow-ups to be checked within 12 months, and the desistance theory and Child First approaches would argue that is potentially too short a period to observe meaningful change[42]. The data may show children on the first stage of their desistance journey where significant change is less likely; however, there was not the substantial difference by age that this conclusion would imply, i.e. older children would be further on the journey and positive improvements could be expected.

The data available identified important differences between children. Some concerns were increasing for more vulnerable children (younger children and those with a greater number of previous offences) and for those supported though community orders and cautions. This highlights the future need to monitor and review concerns within different cohorts of children, because the AssetPlus framework is premised on providing interventions for particular children's needs.

Behaviour change

Positive changes were found in compliance with orders. This is an important outcome for a desistance approach that would expect motivated children to attend more and breach less. The analysis found a reduction in breach rates of approximately one percentage point since the introduction of AssetPlus. While this is small and there are limitations to this result[43], it is a change that

---

[41] Cattell, J. et al (2014) *Results from the Offender Management Community Cohort Study (OMCCS): Assessment and sentence planning* (MoJ: Online publication)

[42] See the technical report for why it was limited to 12 months.

[43] There could be different breach polices between the control and AssetPlus groups, and the result could be the product of changes in reoffending that could not be measured.

AssetPlus was expected to cause. This result does not stand alone. The case study evidence suggests that compliance improved because of AssetPlus. These results found improvements in order completion and importantly that children were less likely to miss a supervision appointment within the first months of supervision. This suggests that greater motivation was being generated early in a period of support, even if a child's strengths could not be promoted within this timescale.

No estimated impacts from AssetPlus were found on CSPPIs. The assessment tool allows information to be collected that could be used to prevent such incidents happening, but they are rare events, based on several extreme outcomes, further qualitative research may allow for a more in-depth understanding of why this anticipated benefit has failed to materialise.

The number of remands used remained relatively constant over the period of investigation. No strong evidence was found that AssetPlus reduced the use of remand, either when used in an upcoming court proceeding or when it was available for a subsequent offending event. It is unknown why this is, because a reduction in remands to custody was an important aim for the new assessment tool. Further research is required to provide an explanation as to why this outcome has not materialised.

Conclusion

The overall estimated impact of AssetPlus on the outcomes included in this study has been limited. The time taken to complete the assessment appears to have increased over time, which was against expectations. The number of concerns in a child's life identified did not decrease over time, and nor did the rate of CSPPIs and remands decrease. The results suggest that compliance with orders may have improved because of AssetPlus. The breach rate was lower in the AssetPlus group than in the control group, and the case study information suggested order completion and compliance with face-to-face contacts was greater after the introduction of AssetPlus. This last result is consistent with the primary stage of desistance – that the child complies with their order – which is the desistance stage at which initial reductions in offending are expected.

The results of the study were also limited by the available outcome measures. Not all the expected outcomes of AssetPlus could be included in the study because the collection of data had not been incorporated into the framework at the outset to allow its measurement.

Appendix A: Methodology

This appendix describes the methodology used to estimate the impact of AssetPlus. It describes:

- The outcomes that were assessed; and
- The evaluation approach used to assess impact on each outcome.

Outcomes assessed

The YJB identified a short-list of outcomes that AssetPlus was expected to change, and the technical report describes what was included in the outcome evaluation and why. The recommendation was primarily based on the available data and whether the potential method to evaluate an outcome was sufficiently robust. Some outcomes were excluded either because the available data had missing responses or because a sufficiently robust outcome evaluation design was not possible (the project prescribed that at least a before and after design should be used).

Table 4 lists the outcomes that were included in the evaluation. It also describes each outcome's data source and its outcome evaluation method (these are explained in the next section).

Outcome	Data source	Evaluation method
Time taken to complete assessments.	YJB survey of YOTs	Before and after
The number of speech, language, and communication (SLC) concerns.	AssetPlus	Before and after
The number of concerns recorded in the assessments.	AssetPlus	Before and after
Compliance with face-to-face contacts and order completion.	YOT case management data	Case study historical controls
Rate of order breaches.	YJB YJAF data	Historical control
Rate of CSPPIs.	YJB data on CSPPIs	Historical control
A custodial sentence following being placed on remand.	YJB YJAF data and sentencing data	Historical control
Remand for subsequent offences.	YJB YJAF data and sentencing data	Historical control

The following anticipated outcomes were excluded from the evaluation:

- Greater confidence among young people / parents and carers in YJS.
- Increased consideration / use of Restorative Justice.
- Improved identification and analysis of concerns around serious youth violence and gang affiliation.
- Improved confidence among YOT staff and volunteers in assessment tools.
- Improved quality of assessments.
- Reduced breaches of bail.
- Reduced reoffending.

The study's technical report explains why these outcomes were excluded. These exclusions limit what can be concluded about the impact of AssetPlus. Of note is that it was not possible to evaluate the estimated impact on reoffending. Police National Computer (PNC) data could not be matched to the YJB's dataset because large numbers of PNC numbers were either missing or incomplete in the latter. To include reoffending in the analysis, YJB will need to collect complete PNC data from each individual YOT.

Evaluation methods

Due to the availability of data and their limitations, three different evaluation methods were used to estimate the impact of AssetPlus, and the method used for each outcome is listed in Table 3 above. Interviews with stakeholders fed into the study design process.

Historical control

The historical control evaluation is a quasi-experimental design where children who were assessed using AssetPlus are compared to similar children who started their order before its introduction. It is a rigorous method that constructs a control group that is similar in characteristics to the AssetPlus group. The method, therefore, estimates what would happen without AssetPlus. The control group is sampled from before the YOTs used AssetPlus. The design therefore assumes that the context (i.e. general and local policies, crime patterns etc) is the same for the AssetPlus group and the control group. As such, the method controls for the children's characteristics but not for any wider policy or practice changes.

The evaluation team constructed the historical control group using propensity score matching. This uses a range of known criteria to match children in a control group to those in the intervention group (i.e. those that received an AssetPlus). The match criteria were chosen to reflect why a child was selected to receive an AssetPlus (usually due to the sentence type) and to control for factors known to be associated with re-offending to make sure the two groups were as similar as possible.[44] The technical reports sets out the variables, the sample criteria, the matching procedure employed, and the sample balance of the matched intervention and control groups.

---

[44] These were based on the variables used to construct the YOGRS predictor of reoffending. See the technical report for the specific variables.

Two alternatives, and potentially more rigorous, quasi-experimental designs were tested, namely a contemporary control and difference-in-difference. Neither of those methods were possible because, though AssetPlus was rolled out in a staged process, the size of the potential control group was too small. The testing of these alternatives is described in the technical report.

AssetPlus' impact on remands, breaches, and safeguarding incidents was estimated using the historical control approach. The data for each were official datasets, used for YJB and Ministry of Justice statistics. AssetPlus' effect sizes were tested using the McNemar chi-squared test for matched data. The McNemar test is the standard test for dichotomous outcomes in dependent data, but it might not always be appropriate when the control group to intervention group ratio is greater than 1:1. As such the sensitivity of the decision to use McNemar tests was judged by completing conditional logistic regression tests as well. These tests produced similar results (i.e. significance at 95% was the same). Both sets of test results are presented in the technical report.

The data could be clustered to YOTs or courts, i.e. children from one YOT have similar outcomes. Techniques such as conditional logistic regression could have been used to control for these. When criminal justice outcome evaluations have matched areas using PSM in the UK, the analysis has addressed the clustering problem with an appropriate method.[45] There are examples also where clustering effects are not considered for PSM.[46] YOT delivery of AssetPlus varied so a clustering effect might be present on the individual YOT. Following Cannas and Arpino[47], we completed 'within cluster' matching (in other words exact matching on YOT) to balance our data perfectly on potential clusters. We subsequently used the standard McNemar test for matched data, because other

---

[45] For example, Mason, T, Sutton, M, Whittaker, W, McSweeney, T, Millar, T, Donmall, M, Jones, A & Pierce, M 2015, 'The impact of paying treatment providers for outcomes: Difference-in-differences analysis of the 'payment by results for drugs recovery' pilot', Addiction, vol. 110, no. 7, pp. 1120-1128

[46] For example, Joliffe, D. and Hedderman, C. (2014) *Peterborough Social Impact Bond: Final Report on Cohort 1 Analysis* (University of Leicester: Online publication) and the method used at the Justice Data Lab.

[47] Cannas, M. and Arpino, B. (2019) 'Matching with Clustered Data: the CMatching Package in R', *The R Journal*, vol. 11/01, pp. 7-20

MoJ studies used this approach and 'the [correct] analysis of clustered observational data is an active area of research.'[48]

Table 5 describes the sample definitions and sizes for the outcomes evaluated using an historical control.

[48] Ibid, pp. 19

Table 5: Intervention and control sample definitions and sizes for the outcomes evaluated using an historical control

Outcomes	Intervention		Control	
	Definition	n	Definition	n
Breaches and CSPPIs	• First AssetPlus within 3 months (before or after) first commencement after the introduction of AssetPlus in the YOT.	10,533	• Commencement within 13 months and 25 months before the implementation of AssetPlus in the YOT.	18,808
Subsequent remand for a reoffence	• First AssetPlus within 3 months (before or after) first commencement after the introduction of AssetPlus in the YOT. • Has a court hearing within 12 months after the sampled commencement	8,528	• Commencement within 13 months and 25 months before the implementation of AssetPlus in the YOT. • Has a court hearing within 12 months after the sampled commencement, i.e. is still before the introduction of AssetPlus.	13,762
A custodial sentence following being placed on remand	• First AssetPlus created before a court hearing and before first commencement. • Court hearing no more than 3 months before sentence commencement and no intervening commencements that started before AssetPlus. • Was remanded after AssetPlus was created and before sentence date.	225	• Court sentence dated at least one month before introduction of AssetPlus in the YOT but no more than 13 months before. • Court hearing within 3 months of sentence date and no intervening commencements. • Was remanded at a court hearing that meets the above criteria.	895

Before and after

Before and after impact designs estimate impact by comparing outcomes before an intervention with those measured afterwards. They do not include a control group so they cannot directly attribute the observed changes to AssetPlus. Instead, the design infers that AssetPlus is a potential explanation for any changes among many potential changes such as general life changes and events.

The before and after design was used for two data sources: a survey of YOTs and AssetPlus assessment data.

YOT Survey

The YJB surveyed the YOTs' perceptions of how long it takes to complete an AssetPlus on three occasions: first, when AssetPlus was rolled out (the baseline); second, 12 months later; and third, 18 months later. The questions asked each YOT to estimate the time for initial assessments and review assessments separately, and these estimates were broken down by the type of case: statutory, preventative or an out of court disposal. Table 6 describes the sample size achieved at each wave.

Table 6: YJB survey of YOTs sample sizes across three waves

Wave	Responses (percentage in brackets)
1	77 (51%)
2 (12 months later)	31 (21%)
3 (18 months later)	28 (19%)

Five YOTs responded to all three waves. The analysis in the findings chapter, therefore, presented all returns and is not filtered to the YOTs that responded to all three waves. The YJB achieved smaller samples at waves 2 and 3 than was possible for wave 1. This necessitated an unbalanced design to estimate AssetPlus's impact on efficiencies ("unbalanced" means different sample sizes at each wave).

The limitations of an unbalanced design are that there will be less statistical power compared to a balanced design (i.e. less likely to find a statistically significant result), and the results are more susceptible to unequal variances at

each wave. Furthermore, only five YOTs responded to all three waves, so the statistical model must estimate results for missing data. This also means that the sample is biased to the YOTs that responded to more waves.

The evaluation team used mixed effects models to calculate the results because they can be used with unbalanced, dependent data and can estimate results for the missing data (but this means statistical power is reduced). This also helps the analysis to ameliorate the sample bias, but the models cannot eradicate it. The technical report contains the model outputs.

Wave 1 of the survey was administered soon after AssetPlus was implemented in a YOT. It therefore measures the YOT's initial use of AssetPlus, not how it used Asset. As such the results presented describe how the YOTs' use of AssetPlus changed rather than AssetPlus' impact compared with Asset.

AssetPlus

In AssetPlus, practitioners record (in binary yes/no responses) whether they are concerned about a child's risk or protective factors. The factors recorded are:

- Accommodation status
- Attitudes to offending
- Care status
- Learning and education, training and employment
- Family situation
- Lifestyle
- Local issues
- Mental health
- Offending justification
- Parenting
- Physical health
- Relations
- Relationships
- Risk of harm
- Safety and well being
- Speech, language, and communication
- Substance misuse
- Young person as parent

The study team completed a "within subject" (also known as "repeated measurement") analysis to estimate the change in the identification of concerns after the use of AssetPlus.

Mixed effects models were used to estimate the impact on each factor (listed above), where the child and the YOT were defined as random intercepts. The models calculated whether the proportion of children with a recorded concern

changed over time and if this change was greater for certain children. The regression models' outputs are listed in the technical report. Where data were missing, the analysis assumed this meant no concern was recorded, except where all concerns had missing data (these records were excluded).

The sample was restricted to children who have a baseline AssetPlus (defined as within three months of their first recorded offence after the introduction of AssetPlus[49]) and a follow-up AssetPlus assessment completed within 12 months of their conviction. If the child had more than one follow-up assessment within 12 months, then the last assessment was sampled. The minimum gap between assessments was limited to three months. This resulted in a sample of 11,371 children, where the AssetPlus assessments were administered between November 2015 and June 2019.

Case studies

To measure compliance with orders, interventions and appointments, the evaluation team collected data from nine case study YOTs.[50] The nine case studies were selected to represent different policy contexts and different geographies, namely:

- The YOT's first time entrant (FTE) rate in 2016 (the year AssetPlus was generally rolled out): three YOTs sampled from the top 25%, three from the bottom 25% and three from the middle range (25% - 75%). The FTE rate was a proxy for local policies such as who would not be diverted from the youth justice system and therefore eligible for an AssetPlus assessment.
- The YOT's ONS classification: within each FTE group, a YOT represents one of the following ONS classifications – urban, rural and mixed. The local geography was a proxy for implementation challenges, i.e. rural areas might have difficulties with ensuring consistency across spread-out offices and/or staff having limited access to the case management system when supervising children.

Due to the COVID-19 lockdown, the evaluation team collaborated with the makers of ChildView (the most popular YOT case management system, used by 88 YOTs (58%)) to build a report that extracted the required data. A YOT

---

[49] The sample was limited to the first conviction to prevent contamination and prevent sampling the same child more than once.

[50] The YJB does not collate relevant data.

with ChildView was unavailable for one of the sample points – a top 25% FTE rate and classified mixed – so a YOT that used an alternative to ChildView was sampled and similar data were extracted from its system.

Each case study provided three datasets:

1. Interventions: a list of each court ordered and YOT authorised intervention. The data described the type of intervention and whether it was completed. Other than for the completion of the sentence or caution, these data were not completed routinely and therefore were not used in the evaluation.
2. Contacts: each planned contact with a child for an intervention and whether the child attended. These data were used to estimate whether a child missed at least one supervision contact within one, two and three months of commencement or release.
3. Referrals: referrals made to services and whether the child engaged. Similarly, to the intervention data, these data were incomplete and not used in the evaluation.

An initial sample of 3,115 children – comprised of a control and treatment group – were obtained across nine case study areas in England and Wales. The initial sample was then combined with records held by the Youth Justice Board, and, using PSM, a sample size of 1,964 children was produced (651 – out of an original sample of 739 – in the AssetPlus group and 1,313 in the control group). The PSM method applied used the same method as for the national sample. All YOTs were analysed together because purposive sampling was used to find YOTs in different contexts and the YOTs were balanced across the intervention and control groups.

Appendix B: Changes in concerns by child characteristics (before and after method)

Table 7: Statistically significant changes at follow up follow-up in proportion of children with a concern recorded for contextual factors

Concern	Child characteristic			Sentence type (in reference to cautions)			
	Male	Age	Number of previous convictions	Conditional caution	Custodial	Order	Other
Accommodation	Increase ↑	Increase ↑		Increase ↑	Increase ↑	Increase ↑	Increase ↑
Care history							Increase ↑
Family behaviour			Increase ↑				
Local issues	Increase ↑		Decrease ↓		Increase ↑		Increase ↑
Parenting	Increase ↑						
Significant relationships		Decrease ↓		Decrease ↓	Decrease ↓	Decrease ↓	Decrease ↓

Table 8: Statistically significant changes at follow-up in proportion of children with a concern recorded for individual factors

Concern	Child characteristic						
	Male	Age	Number of previous convictions	Sentence type (in reference to cautions)			
				Conditional caution	Custodial	Order	Other
Attitude to offending	Decrease ↓	Decrease ↓		Increase ↑		Increase ↑	Increase ↑
Learning and ETE		Decrease ↓	Increase ↑				
Lifestyle					Increase ↑		
Mental health				Decrease ↓	Decrease ↓	Decrease ↓	Decrease ↓
Offence justification	Increase ↑	Increase ↑				Increase ↑	
Physical health	Decrease ↓			Decrease ↓		Decrease ↓	Decrease ↓
Relations to others					Decrease ↓	Decrease ↓	
Risk to others		Decrease ↓	Decrease ↓	Decrease ↓	Decrease ↓	Decrease ↓	Decrease ↓
Safety and wellbeing	Increase ↑	Decrease ↓	Increase ↑	Increase ↑			
Substance misuse			Increase ↑				
YP as parent	Decrease ↓				Increase ↑		