

Reducing Pupil Exclusions in State-Funded Schools: Final Report

Executive Summary

The Goal

Norfolk County Council (NCC) and the University of East Anglia (UEA) conducted a behavioural insights project which aimed to reduce the number of pupils excluded from state-funded schools in the region.

The Approach

Stakeholder consultation suggested that schools were often unsure which NCC service to contact and under which circumstances. This led to the triage service phoneline, the Inclusion Helpline, being overwhelmed with enquiries that were better addressed to other services or online resources.

The Intervention

We designed an interactive NCC service directory for schools (underpinned with behavioural insights) to try to reduce the burden on the Inclusion Helpline.

- **Simple and Attractive** – The interactive online directory asked the user a series of questions to guide them to the most appropriate resources. The user-friendliness made it attractive to use and gave users an easy journey.
- **Beliefs and Habits** – By structuring the directory as a series of questions, users' beliefs about the relevant questions to ask and habits around the types of support to seek are challenged. This helps them access new resources that would be difficult to find if they relied on their usual search habits.
- **Incentives and Discounting** – As the directory was created by Education Psychologists at NCC, they are aware of freely available support resources for specific difficulties faced by schools (e.g., training for supporting pupils with ADHD). Directory users were often directed to free, professionally produced resources which could be accessed and implemented immediately.
- **Reciprocity** – The creation and provision of a free and effective directory constitutes novel effort on NCC's part towards preventing pupil exclusions. Reciprocity motives suggest that this effort will be met by increased efforts by schools to achieve the joint goal of providing students support.

All schools in Norfolk were sent the details and a link to the directory via a Management Information Sheet (a regular circular sent by NCC to schools). The likely recipients of this are SENDCOs, Headteachers, Deputy Headteachers and other Senior Leadership within a school.

This tool directed users to appropriate local services, as well as online resources, based on their answers to a series of statements.

The Results

The directory led to a 19% drop in overall daily referrals received. Drastic reductions were observed in referrals regarding exclusions (a 42% drop) and those regarding student behaviour (a 41% reduction). While it is difficult to measure the impact on pupil exclusions within the project time horizon, we anticipate that schools accessing the most appropriate resources/services and triage services having more manageable caseloads will reduce pupil exclusions in the medium term.

Project Team

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Problem and Context Summary

Background

The COVID pandemic has caused major disruption to children's lives and education. This has manifested in increased behavioural problems in schools and online learning environments. Fixed-term or permanent exclusion will be the unfortunate outcome for far too many pupils.

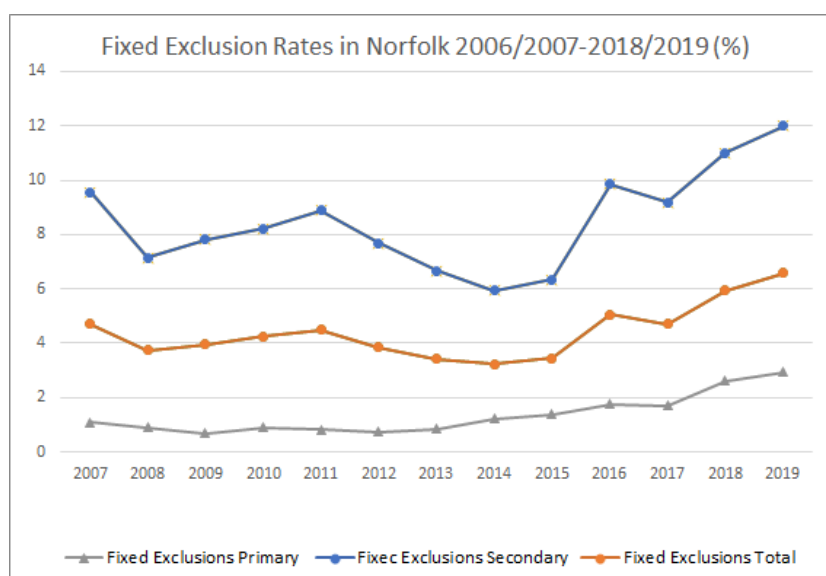
Exclusions have serious long-term consequences for both the excluded child and society as a whole. Excluded children are much less likely to achieve good GCSEs in English and Maths, essential for success in adult life [1], and are at a higher risk of becoming a victim or perpetrator of crime [2].

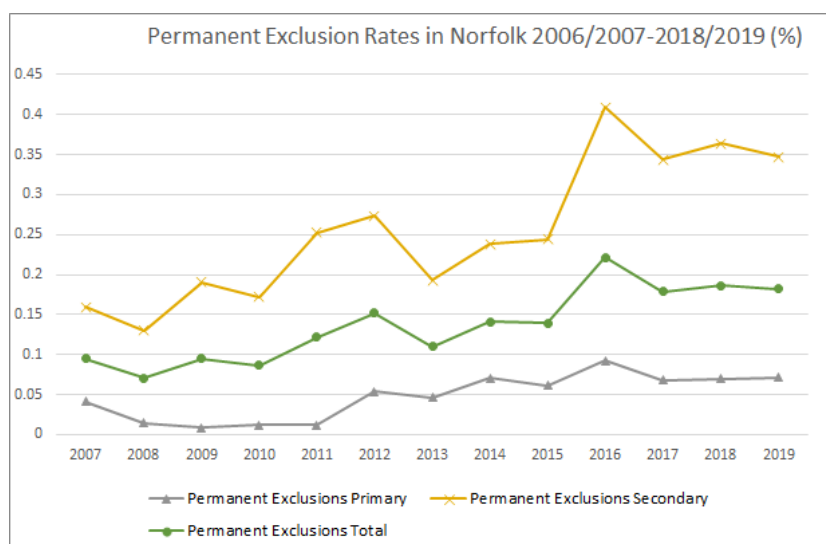
Estimates suggest that each excluded child will cost the public an average of an additional £370,000 [3] – this reflects the costs of: educating a child out of the mainstream system; lost taxation from lower future earnings; associated benefits payments (excluding housing); higher likelihood of entry into the criminal justice system; higher likelihood of social security involvement; and increased average healthcare costs.

This is a national issue with exclusions rates trending upwards for several years pre-COVID. However, it is most acutely felt in areas with above average exclusion rates, like Norfolk.

In Norfolk, permanent exclusions doubled to 209 between 2008/2009 and 2018/2019 and fixed-term exclusions increased by 60% to 7558 over the same period [4]. Three-quarters of these exclusions are from secondary schools. The region's permanent exclusion rate is almost double the national average and its fixed-term exclusion rate is 22% higher than the national average.

The graphs below illustrate the trends in permanent and fixed-term exclusion rates (defined as the number of exclusions in an academic year divided by the total number of pupils on roll as at the January census day) in Norfolk, by types of schools.





Reasons for Exclusions

Disruptive behaviour is cited as the official reason for a third of all Norfolk exclusions. Other common officially cited reasons include verbal or physical assaults of other pupils or adults.

Official reasons provide a very limited understanding of the underlying causes of the exclusion. While it is difficult to generalise, statistically, excluded children often have faced prior difficulties in childhood. Excluded children are twice as likely to be in state care, four times more likely to have grown up in poverty, seven times more likely to have a special educational need and 10 times more likely to experience recognised mental health issues [3].

According to a recent national review of exclusions, a reduced reliance on exclusions would necessitate an increase in staff having “the right tools, capability and capacity [to manage poor behaviour]” [1]. This in turn would imply a more diverse, inclusive and fair classroom, where every child, regardless of their characteristics, needs or the type of school they attend, would receive a high-quality education allowing them to flourish.

Local authorities are uniquely placed to support schools in achieving such an environment.

Stakeholder Research

Initial stakeholder research (see project Progress Report) with NCC service providers and schools delivered two main insights:

- **Service Capacity:** The Inclusion Helpline in particular was currently overwhelmed with the number of calls it receives.

- **Service and Resources Knowledge:** Many schools were unaware of what different services NCC and other organisations provide, and also which resources are freely available.

To explore the barriers that schools face in accessing the most appropriate help, we conducted additional stakeholder consultation.

Semi-structured interviews were conducted with six school staff (four Special Educational Needs and Disabilities Co-Ordinators (SENDCOs) and two Headteachers). Two of the schools were primary level and four of the schools were secondary level. Four of the schools were based in Norwich and the other two were based in large towns in other parts of the county.

The interview schedule contained 8 open ended questions exploring headteachers' and SENDCOs' experiences of working with children at risk of exclusion and using NCC services to support this group. Two main research questions were explored: 1) What is schools' experience of using external services to support this group of children and 2) What would schools find most helpful to support this group?

Experiences of External Services

- Capacity
'We refer to early help a lot, but they are swamped and there is just not enough staff'
- Lack of tailoring and specialist support
'I think once you've used those services a few times you know the same as everyone else - they've got their bank of ideas and their experience'
'Most of what they send in terms of recommendations confirms that we are already doing all these things. So often it is a tick box exercise to show that we have sought support'
'It also felt like there was a bank of ideas but really we needed something more specialised and tailored for this particular child'
- Fragmented services and access issues
'We have major issues with accessing NCC services – I find it fragmented, difficult to navigate, poor communication between teams'
'The biggest issue is trying to find a service as it is hard to figure out who to get involved for different issues'

Ideas for Improvement

- More practical resources

‘Recommendations that are more practical – so actually give us the resources because schools as you know are so busy. Modelling recommendations so actually showing staff how to do, anything more practical’

- Better navigation of services

‘A diagram of NCC services with a clear understanding of who to contact for what support would be extremely helpful’

‘Definitely clearer guidance on different services at NCC – it is fragmented and difficult to navigate’

- Increased access to specialist support earlier on

Intervention Design and Behavioural Insights

The above stakeholder research already suggests the type of intervention needed, provision of effective information to schools to inform them which services and resources to contact for different types of difficulties they may have with pupils at risk of exclusion.

In order to maximise the effectiveness of any such information, we will embed a number of behavioural insights.

Relevant Behavioural Insights

Simple – Considerable research shows that when it is difficult to find the answer to a problem we disengage with searching [5]. Whereas when solving the problem is easy, we use automatic mental processes to make the effort cost of solving the problem even easier.

- Navigating many different fragmented NCC service websites to find the right resources can involve a lot of effort.
- Schools thus often revert to the Inclusion Helpline or just do not seek help.
- The intervention should make services/resources easier to find.

Attractive – If something is enjoyable or looks aesthetically pleasing, we are more likely to engage with it [5].

- The information should be presented in an attractive way and be user-friendly.

Beliefs and habits – Our choices are often guided by our beliefs and habits [6]. Making a choice is effortful, it is much less effort to do whatever we are used to doing (even if this is not what is best in this particular case). Our beliefs are often not accurate. For instance, when searching for information, we often search selectively such that we confirm our prior beliefs (confirmation bias).

- Schools have grown accustomed to certain NCC services and assume that there is no more appropriate help available.

- The intervention should help challenge such beliefs and change service access habits.

Incentives – If something is cheaper we are more likely to purchase it. Given how mental accounting works, if something is “free” we are considerably more likely to purchase it than something that is cheap, but not free.

- Many of the more intensive services offered by NCC are chargeable to the school budget, this can disincentive accessing resources and help at all.
- Schools appear to be largely unaware of the *free* and very effective resources available online (e.g., videos made by Educational Psychologists).
- Highlighting free resources should be part of an effective intervention.

Reciprocity – Evidence suggests that if people do something kind for us, then we are more willing to do something useful for them [7].

- Some schools have grown accustomed to NCC’s initial triage service provision.
- An intervention that schools perceive as a novel effort by NCC may make schools more willing to engage with searching for more appropriate support for pupils at risk of exclusion.

Hyperbolic discounting – People have a strong preference for gratification sooner than later. We are more likely to exert effort today (for a benefit tomorrow) if the cost is low than if the cost is higher [8].

- Schools feel like accessing help is a lot of effort.
- Reducing the schools’ effort costs in accessing support and increasing the immediate benefits of undertaking such effort is important in motivating schools.

The Intervention

Based on the above research, we created an interactive online directory that would signpost resources available for schools whether they were provided by NCC or elsewhere.

Simple and Attractive – The interactive online directory asked the user a series of questions to guide them to the most appropriate resources. The user-friendliness made it attractive to use and gave users an easy journey.

Beliefs and Habits – By structuring the directory as a series of questions, users’ beliefs about the relevant questions to ask and habits around the types of support to seek are challenged. This helps them access new resources that would be difficult to find if they relied on their usual search habits.

Incentives and Discounting – As the directory was created by Education Psychologists at NCC, they are aware of freely available support resources for specific difficulties faced by schools (e.g., training for supporting pupils with ADHD).

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Reciprocity – The creation and provision of a free and effective directory constitutes novel effort on NCC's part towards preventing pupil exclusions. Reciprocity motives suggest that this effort will be met by increased efforts by schools to achieve the joint goal of providing students support.

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In addition, certain schools also received information about the new directory via meetings with NCC's Educational Psychology and Specialist Support (EPSS) team, i.e., Core Consultations and School Consultation Planning Meetings). The directory was thus particularly salient for such schools, we will understand the effect of this additional advertising when we analyse the impact of the directory.

Impact Evaluation and Data

In order to evaluate the impact of the intervention, we used an event study (also known as *before-after*) statistical design to compare the referral traffic to the Inclusion Helpline after the Directory was made available, compared to before.

The before-after design requires that the time periods around the intervention are very similar in terms of referral traffic, in the absence of the introduction of the Directory. We also assume that all other things potentially affecting the number of referrals, such as the Inclusion Team's capacity, or schools' needs, remained constant during the period of the study.

To ensure this level of comparability, we look only at referrals in the periods 28th September – 19th November 2021 (before the Directory was advertised) and 17th January to the 9th of March 2022 (after the Directory was advertised). The two periods are of roughly equal length (8-9 weeks), they both contain a half-term break and a funding deadline, and they exclude the holiday periods. In total we have 90 days of observations, 44 days before, and 46 days after the introduction of the Directory.

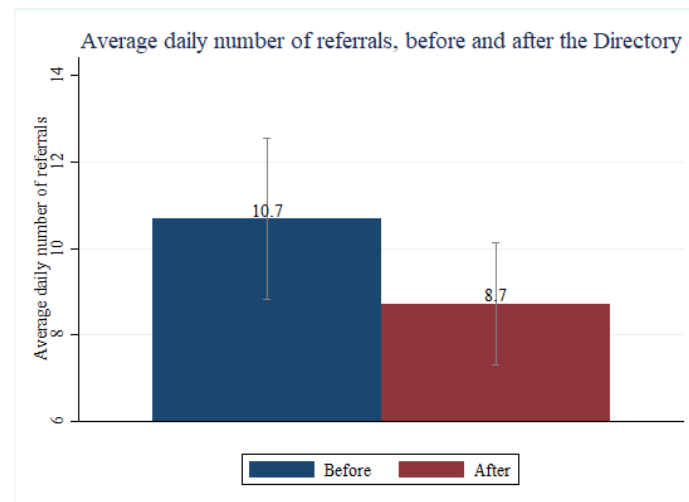
Each referral is recorded separately, and we know how many referrals there were and the type of referrals for each day throughout this period. The data also records whether the referrals came from primary, secondary or other types of schools. In addition, we know whether the school which made the referral had a traded contract or had Core Consultations with EPSS – as stated earlier, such schools have higher exposure to the directory.

Main Results

Daily Number of Referrals

We compare the average daily number of referrals after the introduction of the Directory (14th January 2022), with the average daily number of referrals from before its introduction. The simple comparison of these averages is displayed in Figure 1 below, not accounting for any other possible factors which may affect referral traffic:

FIGURE 1. REFERRAL TRAFFIC BEFORE AND AFTER THE INTERVENTION



Notes: The height of the vertical bars on the y-axis represents the average number of daily referrals. 90% confidence intervals for the average estimates are also reported.

From Figure 1 we see that:

- There was an **overall reduction in the referral traffic** after the introduction of the Directory.
- **Average referrals/day fell by 19%** (from 10.7 referrals to 8.7 referrals)
- The 90% confidence intervals¹ overlap slightly, but an appropriate statistical test comparing the two averages shows that referrals are statistically significantly lower at a 10% significance level.²

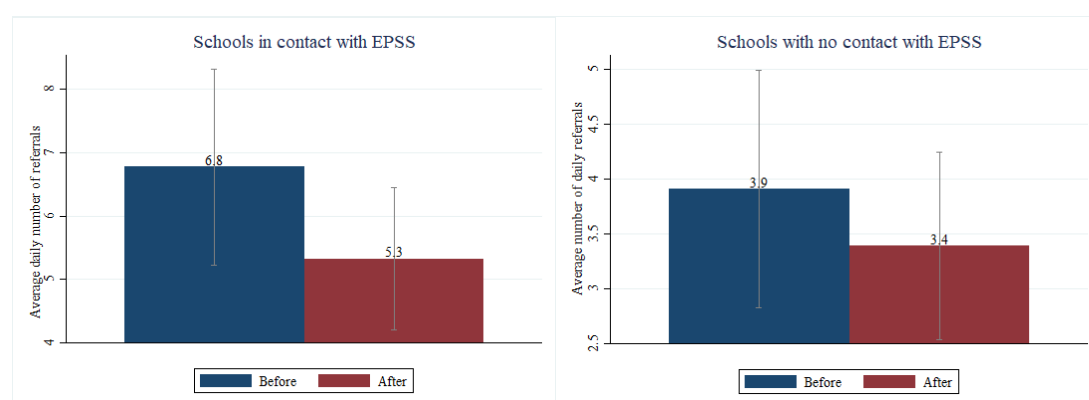
¹ The confidence intervals represent the estimated ranges of values which are very likely to include the true average number of referrals (that is, the average number of daily referrals if we were able to measure this for all day in the year).

² The significance level is the risk we accept that we will get a false positive on the means comparison test. A 10% significance level means we accept that if the average number of referrals stayed constant in reality, and we performed this test 100 times, in 10 of those occasions we would wrongly conclude that there was a drop in average number of referrals. In a means comparison test of the type we perform here, if the relevant test statistic (p-value) is lower than the significance level, we conclude that there is evidence that the means are different.

Enhanced Information about the Directory and Daily Number of Referrals

In Figure 2 we show the comparison of the average number of referrals, separately by referrals made by schools with prior contact to EPSS (meaning that the information about the Directory might have been more salient for these schools), and referrals by schools without prior contact to EPSS (meaning that these schools only had the standard information about the Directory, which was sent to all schools).

FIGURE 2. REFERRAL TRAFFIC BEFORE AND AFTER THE INTERVENTION, BY SCHOOLS WITH AND WITHOUT CONTACT WITH EPSS



Notes: The height of the vertical bars on the y-axis represents the average number of daily referrals. 90% confidence intervals for the average estimates are also reported.

Figure 2 shows that:

- The **drop in the average number of referrals is larger in absolute and relative terms in the schools with a prior contract or a core consultation with EPSS**, compared to those with no further contact with EPSS.
- Average referrals/day from schools in touch with EPSS fell by 22% (6.8 to 5.3 referrals), while the reduction was only 13% (3.9 to 3.4) for those not in touch with EPSS.
- The reduction is not statistically significant at 10% significance level (see footnote 1) for schools with no contact with EPSS, but it is at the threshold of statistical significance for schools in touch with EPSS.³

³ Moreover, the large magnitude, despite the small sample of only 90 days, is highly suggestive that there was a noteworthy drop in the referral traffic to the inclusion team in schools which had access to enhanced information.

The results above are suggestive that there was a sizeable drop in the number of referrals after the introduction of the Directory. To make the results more conclusive, we need to also account for other possible changes across the study period which may have affected the number of referrals independently of the Directory.

We run an econometric analysis based on Ordinary Least Squares regression, in which we can estimate the impact of the Directory introduction, while also including other key moments in the school term (such as half term breaks, school funding deadlines, or the cyclicity of school communications during each month), which may generate spikes or dips in referrals.

Table 1 reports the estimated impact of the Directory on referrals, net of other changes that occur during term time. The main results are qualitatively similar to those in Figures 1 and 2. The estimated impact is slightly smaller, and at the threshold for significance (the p-value in column 1 is 0.103). Overall, there is a reduction by around 1.4 referrals per day on average (a 13% drop compared to the baseline period) which can be attributable to the introduction of the Directory, once we net out other changes in the number of referrals due to significant moments in the school term. The reduction is around 1 referral per day on average for schools in contact with EPSS. These are sizeable effects given that other factors are accounted for.

TABLE 1. THE IMPACT OF THE DIRECTORY ON REFERRALS, NET OF OTHER FACTORS

	(1)	(2)	(3)
	Daily Referrals	Daily Referrals	Daily Referrals
		Schools in contact with EPSS	Schools with no contact with EPSS
After Directory	-1.462	-1.036	-0.426
	(0.103)	(0.254)	(0.555)
Controls for funding deadlines	Yes	Yes	Yes
Controls for midterm breaks	Yes	Yes	Yes
Controls for weeks	Yes	Yes	Yes
Observations	90	90	90
R-squared	0.667	0.476	0.336

Notes: The table estimates the impact of the Directory on average daily referrals, in total and by the level of contact with EPSS. The estimates from Ordinary Least Squares regressions are reported, and the p-values from two-means comparison t-tests are reported in parentheses.

The impact of the Directory on referrals by category

The four most frequent referral categories are:

- At risk of permanent exclusion or fixed-term exclusion (PEX and FEX, 11% of all referrals);
- On pupil behaviours (low- level disruption, dysregulated, or causing significant harm - 23% of all referrals);
- Poor school attendance/school avoidance (11% of all referrals);
- Funding and signposting (7% of all referrals).

Figure 3 shows the average referrals/day before and after the Directory was introduced, for each referral category.

FIGURE 3. COMPARISON OF REFERRALS BY PURPOSE

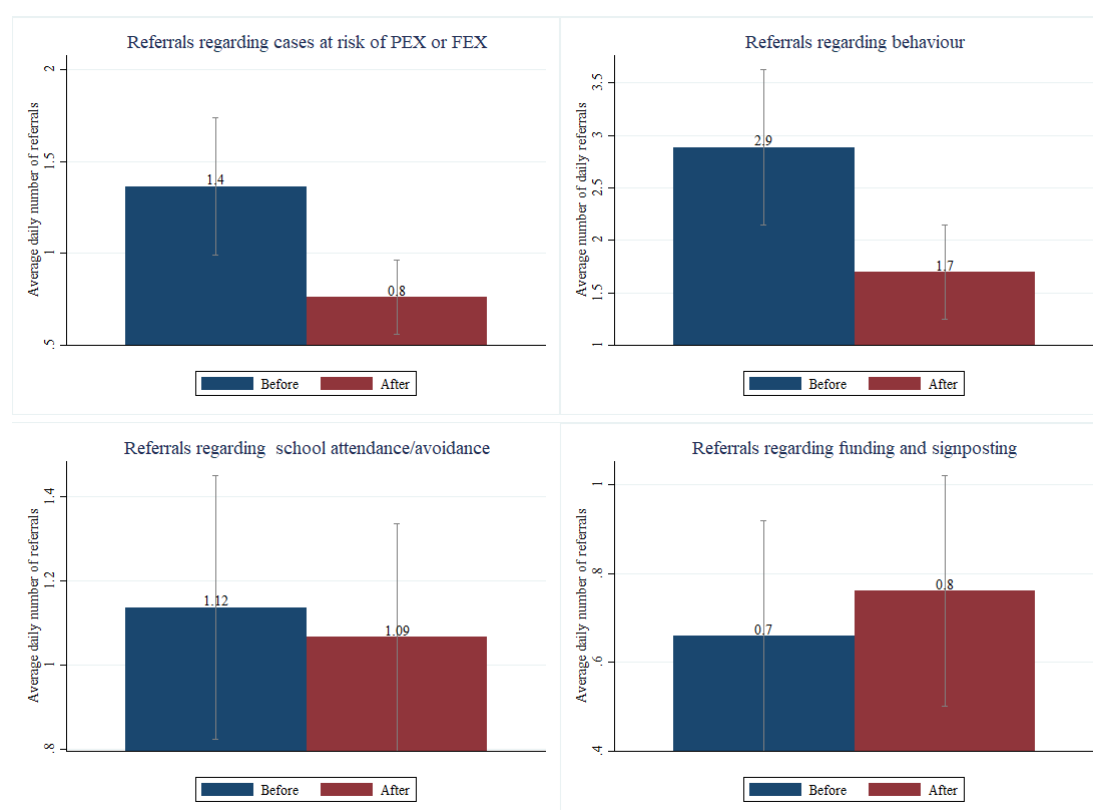


Figure 3 shows that:

- **A 42% reduction in referrals for cases at risk of PEX and FEX** (from 1.4 to 0.8 per day)
- **A 41 % reduction in referrals for pupil behaviour** (from 2.9 to 1.7 per daily)
- Hardly any changes in the number of referrals regarding school attendance or funding and signposting.⁴

⁴ Note that the 90% Confidence Intervals for the referrals regarding PEX, FEX or behaviour do not overlap, suggesting that the differences are statistically significant at 10% significance level. See footnote 1 for an explanation of statistical significance.

These findings are encouraging, because such cases are complicated and often necessitate specialised support, meaning that they could be managed more effectively with appropriate signposting. Furthermore, reduced reliance on the Inclusion Team's helpline could put less pressure on the service and result in better management of other school or pupil-related issues.

Table 2 below shows that the difference in the number of referrals for behaviour, PEX and FEX, between before and after the Directory implementation persists even when we account for other possible sources of changes in referrals throughout the study period (midterm breaks, funding deadlines, and time of the month).

TABLE 2. THE IMPACT ON REFERRALS BY PURPOSE OF REFERRAL

	(1) Daily Referrals (Behaviour)	(2) Daily Referrals (FEX and PEX)	(3) Daily Referrals (attendance)	(4) Daily Referrals (funding/signposting)
After Directory	-1.042 (0.027)	-0.564 (0.018)	-0.045 (0.837)	0.139 (0.529)
Controls for funding deadlines	Yes	Yes	Yes	Yes
Controls for midterm breaks	Yes	Yes	Yes	Yes
Controls for weeks	Yes	Yes	Yes	Yes
Observations	90	90	90	90
R-squared	0.333	0.320	0.319	0.177

Notes: The table reports estimates of the impact of the Directory on average daily referrals, by purpose of the referrals. The estimates from Ordinary Least Squares regressions are reported, and the p-values from two-means comparison t-tests are reported in parentheses.

Summary and Discussion

In this project we explored how behavioural insights could be used to reduce pupil exclusions in state-maintained schools in Norfolk. A key bottleneck was identified, the Inclusion Helpline, a triage service which was overwhelmed with calls.

Following stakeholder engagement, an online interactive directory was developed with the aim to reduce the number of calls received by the Inclusion Helpline. The directory leveraged many different behavioural insights including: making accessing help *simple and attractive*; leveraging *reciprocity* motivations by providing schools with concrete resources; understanding *incentives* by flagging free resources and breaking incorrect *beliefs* and *unhelpful habits* by presenting a new resource search tool that challenges individuals' assumptions.

The Behavioural Insights-informed Directory led to a 19% reduction (a reduction of 1.4 referrals per day, or a reduction from 107 to 93 over 10 days). Of particular note was the 40% reduction in calls regarding challenging behaviours and cases at risk of exclusion.

Clearly these results are very encouraging. We anticipate that schools accessing appropriate resources sooner and the reduced burden on the Inclusion Helpline will in turn have a positive effect on pupil outcomes and reduce exclusions.

A few caveats are worth mentioning with regards to our findings. Since data was only collected over a short period, it is unclear whether the effect of the directory will persist in the medium term or whether call volumes will revert back to original levels.

We also note that there was a downwards trend in calls during the data collection period. While this might suggest that the drop we recorded is due to a general trend rather than the directory, this is unlikely given that the drops in call volume was driven by precisely the types of calls that the directory was trying to redirect.⁵

Future evaluations of such work should use longer time periods. Ideally the data would contain the comparable periods in the previous years. This was not possible in the case of the present project, since the COVID pandemic affected school attendance, behaviour and referrals in 2020-2021 in unpredictable ways, rendering the data less comparable.⁶

Nonetheless, this project shows clear promise for using behavioural insights in improving local authority service access around pupil exclusions.

⁵ Note that we see a drop in the number of referrals for certain types of referrals, but not for all types. For example, referrals regarding absences and funding have stayed constant across this period of time. Also, referrals by schools which have not had contact with EPSS have seen a much lower drop than referrals by schools which have core consultations or traded contracts with EPSS. This is evidence that there is not generalised downward trends in referrals.

⁶ Other designs recommended are difference-in-differences, where a group of schools that is treated with the intervention is followed over time and compared to a group of comparable schools that is not treated with the intervention. Where it is possible to randomly decide who takes the intervention, the most robust design is a randomised control trial.

Bibliography

- [1] Department for Education (2019) *Timpson Review of School Exclusion*.
- [2] Home Office (2018) *Serious Violence Strategy*.
- [3] Institute for Public Policy Research (2017) *Making the difference: Breaking the link between school exclusion and social exclusion*.
- [4] <https://explore-education-statistics.service.gov.uk/find-statistics/permanent-and-fixed-period-exclusions-in-england#dataDownloads-1>
- [5] The Behavioural Insights Team (2014). *EAST: Four Simple Ways to Apply Behavioural Insights*.
- [6] Kahneman, D. (2012) *Thinking fast and slow*. Penguin.
- [7] Fehr, E. and S. Gaechter (2000) "Fairness and retaliation: The economics of reciprocity" *Journal of Economic Perspectives* 14(3): 159-181.
- [8] Laibson, D. (1997) "Golden Eggs and Hyperbolic Discounting" *The Quarterly Journal of Economics* 112: 443-478.