



## Evidence Appraisal Report

### Intensive family preservation programmes for families in crisis

#### Appraisal summary

##### Why did Health Technology Wales (HTW) appraise this topic?

Children and young people in Wales have a right in law to be safe, to play, to have an education, to be healthy and be happy. For most children, the family environment is a place that they can thrive. However, some children are at risk of suffering harm within their families due to child abuse and maltreatment. Where there are concerns about a child's welfare, children's services may need to intervene, and this could include removing children from the family home for varying periods of time. Where possible children's services will aim to keep children in the family environment and for some families, targeted interventions may help to resolve crises and allow children to stay within their family environment rather than enter care.

Intensive family preservation programmes (IFPP) are short-term, intensive interventions which are aimed at a period of crisis where there is an imminent risk of a child entering care. They aim to resolve crises by providing direct support to a family to improve skills and resilience, and indirect support through linking families to additional services. In Wales, there is a requirement for some form of intervention targeted at avoiding children entering care to be delivered by local authorities through Integrated Family Support Services (IFSS). However, it is unclear whether local authorities adhere to evidence-based models of care.

This topic was proposed by Jonathan Scourfield, Professor of Social Work at Cardiff University.

##### What evidence did HTW find?

This report aims to identify and summarise evidence that addresses the following question: What is the effectiveness and cost-effectiveness of intensive family preservation programmes for families in crisis where there is an imminent risk of children entering care?

A literature search identified a range of primary and secondary evidence. In line with our rapid review approach outlined in the protocol, a recent systematic review and meta-analysis that reported on rates of out-of-home placement met our inclusion criteria and was considered the highest priority evidence Bezczky et al. (2020). In addition, we also included five primary studies conducted in the UK setting that provided additional outcomes on out-of-home placement or other outcomes relating to children, parents, or family functioning (Biehal 2005, Brandon & Connolly 2006, Forrester et al. 2008, Forrester et al. 2016, Thom et al. 2014).

Findings from these studies suggest that IFPP are associated with reductions in out-of-home placement and can keep children within the family unit. Where available, outcomes relating to child well-being and family functioning did not appear to improve on receiving IFPP, but results

trended towards benefits and there was no suggestion that staying within the family unit was detrimental to children. Outcomes relating to parents were mixed across studies, but some suggested that IFPP are associated with reduction in distress and substance misuse. However, it should be noted that most available evidence came from non-randomised studies with varying risk of bias, and this adds uncertainty.

Children's and parent's perspectives on IFPP and wider involvement with children's social services were also captured through literature searches on the advice of the HTW Public and Patient Involvement Standing Group.

A de-novo cost-consequence analysis was conducted to evaluate the costs and outcomes associated with IFPP compared to not using the intervention, from a Welsh perspective. IFPP was found to be associated with fewer children being in out-of-home care at the end of the two-year modelled time horizon, which translated to a reduction in costs, due to fewer children accumulating high costs of care. Results of the analysis were robust to sensitivity analysis.

### **What was the outcome of HTW's appraisal?**

This topic was brought forward at HTW Appraisal Panel on 28 March 2023. The Appraisal Panel concluded the evidence supports the adoption of intensive family preservation services for families in crisis. The use of intensive family preservation programmes (IFPP) reduces the risk of out-of-home child placement. Parent and children's perspectives support the view that IFPP are beneficial and can address crises that may risk a child's entry to care. While the evidence leaves some uncertainty about the impact of this on child emotional and behavioural wellbeing, there seems to be no evidence of harm. The economic analysis is associated with uncertainty but indicates the potential for cost savings of up to £12,171 per child through the use of IFPP, largely due to the avoidance of out-of-home placement.

## 1. Purpose of the Evidence Appraisal Report

This report aims to identify and summarise evidence that addresses the following question: What is the effectiveness and cost-effectiveness of intensive family preservation programmes for families in crisis where there is an imminent risk of children entering care?

Evidence Appraisal Reports are based on rapid systematic literature searches, with the aim of identifying the best published evidence on the effectiveness and cost-effectiveness of health and social care technologies and models of care and support. Researchers critically evaluate this evidence. The draft Evidence Appraisal Report is reviewed by experts and by Health Technology Wales multidisciplinary advisory groups before publication.

## 2. Context

Children and young people in Wales have a right in law to be safe, to play, to have an education, to be healthy and be happy (Welsh Government 2022). For most children, the family environment is a place that they can thrive. However, some children are at risk of suffering harm within their families due to child abuse and maltreatment. Child abuse can include physical violence and sexual abuse but also includes other forms of maltreatment. This can include emotional abuse, where a pattern of behaviour damages a child's sense of self-worth and emotional development, and neglect, where basic needs are persistently not met. In cases where children are at risk, or suffering from harm, children's services have a responsibility to protect a child's welfare.

Where concerns about a child's welfare have been identified, children's services and other agencies will investigate and make an assessment on whether there are ongoing concerns of significant harm. A plan will then be put in place to ensure the child is safe and promote their welfare by addressing vulnerabilities and risk factors and helping meet a child's unmet needs. However, if the child remains at risk and issues cannot be addressed, a local authority may issue care proceedings where a court will be asked to decide whether a child should be removed from the parents' care. For some families where there is an imminent risk of a child entering care, targeted interventions may be able to resolve problems during a period of crisis thereby protecting a child's welfare and maintaining the family unit. However, there is also likely to be a group of children where the risk of harm is considered too high or immediate for a child to stay in the home and interventions to reduce out-of-home placements would not be appropriate.

There are around 7,000 children in Wales who are looked after away from the home (StatsWales 2022) and around 2,000 children begin new stays in care each year (Hodges 2020a). These numbers are proportionately higher than the numbers in the other UK nations and have risen in recent years due to a complex set of factors (Hodges 2020b). Welsh Government have identified that safely reducing the number of children needing care is a priority and that identifying best practice in services provided at the "edge of care" is an area for action (Welsh Government 2019).

In Wales, the above processes are governed by a legal framework and local authorities and other public sector bodies have a statutory duty to safeguard and promote a child's welfare. Section 47(1) of the Children Act 1989 (UK Government 1989b) contains duties that require each local authority to make or direct enquiries that support decision making on whether to take action. This may lead to children leaving their home and becoming "looked after", either voluntarily in accordance with Section 76 of the Social Services and Well-being Act 2014 (Welsh Government 2014), or following a court order in accordance with Section 31 of the Children Act 1989 (UK Government 1989a). During this process, local authorities and other agencies would also need to have regard for relevant provisions within the Children Act 1989, Adoption and children Act 2002, Children Act 2004, Children and Families Act 2014, Children and Families Act 2014., Social Services and Well-being Act 2014, Well-being of Future Generations Act 2015, Children and Social

Work Act 2017. Experts noted that the supporting ethos of this legislation is to keep families together where possible.

### 3. Model of care and support

Intensive family preservation programmes (IFPP) are short-term, intensive interventions which are aimed at a period of crisis where there is an imminent risk of a child entering care. They aim to avoid the need for a child to enter care by helping families to overcome issues which are driving the crisis. They also aim to provide skills that can improve family functioning over time and improve child welfare after the crisis and interventions have ended. Crises that cause an imminent risk of a child entering care may be driven by a range of issues and IFPP are designed to be responsive to the needs of individual families.

The specific details of IFPP, including the length of delivery and approaches to resolving issues, are variable within the literature. However, there appears to be a set of key characteristics which most commonly define delivery. In these, IFPP are provided to families for a time-limited period during crisis, are delivered within a family's home environment with additional remote support and are coordinated by caseworkers with small caseloads to allow intensive contact. Within this structure, caseworkers are able to deliver a tailored set of interventions that target the challenges that a family may be facing. These interventions can include direct work with members of the family to develop skills and resilience, using cognitive behavioural principles and motivational interviewing, and indirect work where families are supported to access other appropriate services. These IFPP are targeted at a period of crisis but aim to provide sustainable solutions over the longer term.

The type of services that IFPP may refer to will be highly dependent on the availability of services within the local health and care system and the needs of individual families. Experts highlighted that IFPP may be able to facilitate referral to other social care services and parenting programmes, domestic violence reduction programmes, drug and alcohol treatment, debt and housing services, and mental health or other health services.

In Wales, local authorities and local health boards are required by legislation to deliver integrated family support services (IFSS) through Regional Partnership Board arrangements. These services are aimed at circumstances where a child will be unable to remain within the family if a support service is not provided and there are issues relating to substance misuse, domestic violence or abusive behaviour, or mental illness. Children who are at risk of abuse or neglect that could be avoided or candidates for reunification with a family after care that would not be possible without services are also eligible. However, legislation does not define the details of what should be delivered within integrated family support services. Experts have suggested that there is variation between the services provided across partnership regions and the extent to which they align with the key characteristics of IFPP model outlined above is uncertain.

### 4. Guidelines

NICE have previously published guidelines (NG76) on recognising, assessing, and responding to abuse and neglect of children and young people (NICE 2017). The guidelines examined IFPP within their evidence review but did not include recommendations on this intervention or other interventions where there is an imminent risk of children entering care. They note that further research on social care interventions for addressing abuse and neglect is needed as there is limited evidence within the UK settings and interventions have not been evaluated with high-

quality research designs. NICE guidelines on looked-after children (NG205) do not cover the period prior to entering care (NICE 2021).

## 5. Effectiveness

We searched for and summarised evidence on the effectiveness of IFPP compared to other models of care and support across outcomes relating to out-of-home placement, child and parent wellbeing, family functioning, and other available outcomes. Section 12 and Appendices 1 to 3 describe the methods used for this in more detail.

The literature search identified a range of primary and secondary evidence. A recent systematic review and meta-analysis that reported on rates of out-of-home placement met our inclusion criteria and was considered the highest priority evidence (Bezeczky et al. 2020). In addition, we also included five primary studies conducted in the UK setting that provided additional outcomes on out-of-home placement or other outcomes relating to children, parents, or family functioning (Biehal 2005, Brandon & Connolly 2006, Forrester et al. 2008, Forrester et al. 2016, Thom et al. 2014). A previous systematic review and meta-analysis that reported on family functioning was identified but not included within this report (Channa et al. 2012). This was due to the availability of individual primary studies from the UK, which were judged as a higher priority due to issues around generalisability and the length of time since the publication of studies included in that meta-analysis. More details on the methodology used to identify and select evidence for this report are available in Section 12. Each of the included studies is described below with further detail in Table 1.

Bezeczky et al. (2020) conducted a systematic review and meta-analysis to examine whether IFPP are effective in keeping families together and reducing the number of children who enter care. Studies were considered eligible if they reported out-of-home placement as an outcome measure and had a control or comparison group. Outcomes were grouped into 3, 6, 12, 18, and 24 month and over 24 months follow-up and are reported separately for studies that analysed outcomes at the child and family-level. The meta-analysis used random-effects models and reports relative risks for out-of-home placement. Additional analyses of possible effect modifiers are also reported.

Biehal (2005) conducted a controlled before-and-after study to examine the impact of an IFPP in England. Children and their families were eligible if they were newly referred to children's services and either parents had requested placement, or a social worker had made an assessment that there was a risk of placement within four weeks. Participants were referred to the services for a range of reasons, including concerns about both the risk of abuse and neglect to the children and the children's behaviour (e.g., conflict with family and peer groups, school attendance and exclusion, and self-harm).

Data was collected on a sample of 209 children aged between 11 and 16 years old across eight local authorities. Of these, 144 children and their parents received an IFPP and 65 received usual care by the social work service. The study reports that two of the eight local authorities did not offer IFPP and participants who did not receive IFPP were also recruited from one of the remaining six authorities that provided these services. It is unclear why some children in this local authority were not considered eligible for IFPP and there appear to be important differences between the wider intervention and control groups at baseline. The study reports outcomes relating to out-of-home placement and on a series of measures aimed at assessing children and parent's wellbeing and family functioning.

Brandon & Connolly (2006) conducted a controlled before-and-after study to examine the impact of an IFPP. The programme was being delivered as a pilot commissioned by two local authorities

with a third sector provider in England. The referral criteria for families are not reported but the aim of the programme is stated as reducing the number of children in care, offering a service for children who need protection, and improving family functioning.

Eighty-six families were referred to the service over the evaluation period. Of these, fifty-seven families completed the programme and 23 of these agreed to complete outcome measures. The comparison group was made up of the remaining 29 families who could not be allocated to the service after referral, who refused the programme, and who started but did not complete the programme. A number of scales for children's and parents' outcomes and family functioning were used in the study. However, data is poorly reported and could only be extracted for a single outcome.

Forrester et al. (2008) conducted a before-and-after study examining the impact of IFPP. The study was retrospective in nature and was based on an IFPP named "Option 2", at that time funded by the Welsh Assembly in several local authority areas. Referrals to the service were assessed for appropriateness, according to whether a child was at risk of being placed into care and concerns about parental substance misuse. In some cases, referrals were accepted if there was a risk of a child being placed on the Child Protection Register. Families that received the service were then compared to families that were referred and assessed as eligible but could not receive the service due to lack of capacity. The study included 279 children within families that received the intervention and 89 children in a comparison group of families who did not receive the intervention. Information on these children was then extracted from routinely collected data provided by the local authorities.

Forrester et al. (2016) conducted a controlled before-and-after study to examine the impact of IFPP for families where parent's misuse drugs or alcohol. The study was retrospective in nature and was based on the "Option 2" programme described above in a Welsh city. It recruited families who had completed the IFPP and a control group of families who had been referred but could not receive the intervention due to resource constraints. The study originally intended to match intervention and control families according to seriousness and referral date but to maximise recruitment this approach was relaxed.

Twenty-seven families were recruited, with 15 having received an IFPP and 12 in the comparison group. The average length of time before follow-up was 5.6 years and the final sample included data from 84 children, and 34 parents or step-parents from the families. The study reports outcomes from routinely collected data on out-of-home placement and on a series of outcome measures relating to children and parent's wellbeing, family functioning, and reduction in drug and alcohol use.

Thom et al. (2014) conducted an uncontrolled before-and-after study in order to evaluate the introduction of an IFPP named "Intensive Family Support Services (IFSS)" in three pilot sites across Wales (Rhondda Cynon Taf and Merthy Tydfil, Newport, Wrexham). These IFSS have now been rolled out across Wales and are provided in some form across all local authority areas.

Brandon & Connolly (2006) and Thom et al. (2014) also provides information relevant to service delivery and information on this is included in Section 7. In addition, studies by Brandon & Connolly (2006), Forrester et al. (2008), Forrester et al. (2016), Thom et al. (2014) report findings from qualitative interviews. Information from this aspect of the studies are reported in Section 8.

**Table 1. Systematic review and meta-analysis: Bezeczky et al. (2020)**

| Included studies  | Inclusion criteria   | Quality and Risk of Bias  | Observation/notes  |
|---|--|---|--|
| <p><b>Number of studies:</b> 33 studies (17 report at the child-level, 13 reporting at the family-level, 1 reported at child and family-level, 2 provided unclear information)</p> <p><b>Setting:</b> UK (n=4), Canada (n=1), USA (n=28)</p> <p><b>Population:</b> The reason for family crisis in the included studies is not reported</p> | <p><b>Review period:</b> January 1974 to December 2018</p> <p><b>Review purpose:</b> To assess the evidence of the effectiveness and cost effectiveness of IFPP in reducing the need for children to enter out-of-home care</p> <p><b>Included study designs:</b> RCTs and quasi-experimental studies with a comparison group</p> <p><b>Included outcome measures:</b> Pooled effect sizes (random-effects model) for out-of-home placement at 3, 6, 12, and 24 months and more than 2 years</p> | <p><b>Tool:</b> Cochrane Risk of Bias Tool for RCTs; ROBINS-I for non-randomised studies. Studies without obtainable papers were not assessed.</p> <p><b>Risk of Bias:</b> For RCTs, high risk of bias (n=9), unclear risk of bias (n=3). For non-randomised studies, moderate risk of bias (n = 6), serious risk of bias (n = 6), critical risk of bias (n = 1)</p> <p><b>Adjustment for publication bias:</b> A funnel plot and Egger’s test suggested possibility of publication bias for child-level studies where small studies with negative results have not been published.</p> | <p>The included studies use different units of analysis, with some including all children at the child-level, some selecting one child within a family to report at the child-level, and some reporting at the family-level. The authors conclude that analysis at the child-level is likely to be most appropriate. This would be likely to retain statistical power but may ignore family clustering effects.</p> <p>There are several issues that may impact the generalisability of findings. 1) A number of studies were published before 2000 and the most recent study was published in 2014. 2) The majority of studies were conducted in the USA and there are only a few studies from the UK settings. 3) There is wide variation in fidelity to the short-term intensive model.</p> <p>There are also a number of limitations with the meta-analytic approach. The combination of differing research designs and models of care means there is a high level of heterogeneity across analyses which is reflected in studies with differing effects. The studies also have widely varying sample sizes and this is not accounted for in random-effects analyses. Further, studies that were not obtainable by the authors are included based on reporting from secondary sources.</p> |
| <p>Abbreviations - IFPP: intensive family preservation programmes, RCT: randomised controlled trial, ROBINS-I: Risk Of Bias In Non-randomised Studies - of Interventions, UK: United Kingdom, USA: United States of America</p>   |  |   |  |

**Table 2. Primary studies from the UK setting: design and characteristics**

| Reference                 | Study Design   | Intervention and Comparator   | Relevant outcomes  | Additional notes / Comments on applicability   |
|---------------------------|--|---|--|--|
| Biehal (2005)             | Controlled before-and-after study<br><br>Multicentre (n=9, England)<br><br><b>Enrolment period:</b><br>Not reported<br><br><b>Follow-up:</b><br>Six months | <b>Intervention:</b><br><br>Specialist teams provided intensive direct support, visiting families up to three times a week. The average duration of support was five months with an average of 33 hours of contact over the first six months of contact<br><br>The specialist teams were more likely to provide interventions aimed at helping children, parents, or both to change their behaviours and address emotional problems. They were also more likely to use interventions aimed at improving parent-child communication and parental care.<br><br>Teams were largely staffed by former residential workers redeployed after closure of children’s homes in the area.<br><br><b>Comparator:</b><br><br>Standard care was a mainstream social work service. The average duration of support was nine months but was less intensive (11 hours over first six months of contact). The service was staffed by social workers.<br><br>Both the specialist team and mainstream service used interventions to address provision of practical, financial, or other material help. | <b>Out-of-home placement</b><br><ul style="list-style-type: none"> <li>Proportion entering care</li> <li>Proportion entering long-term care</li> </ul> <b>Child Outcomes</b> <ul style="list-style-type: none"> <li>Strengths and Difficulties Questionnaire</li> <li>Cantril’s Ladder (section of Lancashire Quality of Life Profile)</li> <li>Severity of Difficulties</li> </ul> <b>Parent Outcomes</b> <ul style="list-style-type: none"> <li>General Health Questionnaire</li> </ul> <b>Family Functioning</b> <ul style="list-style-type: none"> <li>Family Assessment Device</li> </ul> | This study focused on a group of families where the primary concern was the behaviour of children, including violence, self-harm, and exclusion from school. This may have been present in the context of current or past abuse or neglect of the children within families. This contrasts with other studies where abuse and neglect of the children was the primary concern.<br><br>The study reports baseline differences between the intervention and control groups. It is clear that the intervention group have more severe issues indicated by measures of abuse and neglect, contact with health and social services, and reported difficulties. Although parents in the control group appeared to have worse mental wellbeing.<br><br>Differences in baseline scores and other characteristics were controlled for within regression models. |
| Brandon & Connolly (2006) | Before-and-after study with a control group for some outcomes<br><br>Multicentre (n=2, England)  | <b>Intervention:</b><br><br>4-week intensive programme based on a Dutch adaptation of the Homebuilders model. Delivered by qualified social workers. Findings report that the most commonly used strategies were skills teaching, modelling, role play, behaviour charts, advocacy, project exercises and project homework.   | <b>Out-of-home placement</b> <ul style="list-style-type: none"> <li>Proportion entering care</li> </ul> <b>Parent Outcomes</b> <ul style="list-style-type: none"> <li>Parenting Stress Index</li> </ul>  | A series of additional outcomes were included in this study but the presentation of data means that it is not possible to extract for this report.<br><br>The selection of the comparison group means it is highly likely to be  |

| Reference               | Study Design   | Intervention and Comparator   | Relevant outcomes   | Additional notes / Comments on applicability   |
|-------------------------|--|---|---|--|
|                         | <p><b>Enrolment period:</b><br/>Not reported</p> <p><b>Follow-up:</b><br/>One year</p>   | <p><b>Comparison:</b></p> <p>No detail is given on support received by families in the comparison group. No detail on the time spent in the programme for families who did not complete the 4-weeks is given.</p>   |   | <p>different from the intervention group on key outcomes. Families in the comparison group who refused or dropped out from the programme may have had more serious or difficult to solve problems. However, baseline differences are not measured and it is not clear what impact this may have had on findings.</p>   |
| Forrester et al. (2008) | <p>Controlled before-and-after study</p> <p>Number of sites not reported (Wales)</p> <p><b>Enrolment period:</b><br/>Not reported</p> <p>Follow-up:<br/>Average of 3.5 years</p> | <p><b>Intervention:</b></p> <p>“Option 2”</p> <p>Based on the Homebuilders model with intervention at a crisis point, intensive support available 24 hours a day, 7 days a week lasting 4 weeks. Caseworkers worked with a single family at a time.</p> <p>Option 2 was only available to families where there were concerns about parental substance misuse.</p> <p>Interactions included motivational interviewing and solution-focused approaches and aimed to address problems that were causing</p> <p><b>Comparator:</b></p> <p>Information on standard care provided to families when capacity constraints prevented access to “Option 2” is very limited.</p> | <p><b>Out-of-home placement</b></p> <ul style="list-style-type: none"> <li>• Proportion entering care</li> <li>• Time to entering care</li> <li>• Duration of care</li> </ul> | <p>The control group in this study was a cohort of families who had been referred to the Option 2 service but could not be allocated to the caseload due to lack of resources and were not held on a waiting list due to the crisis-oriented nature of the intervention. It is unclear whether any selection of these groups happened in practice with more severe cases, or families thought to particularly benefit were selected.</p> |
| Forrester et al. (2016) | <p>Controlled before-and-after study</p> <p>Number of sites not reported (Wales)</p>   | <p><b>Intervention:</b></p> <p>“Option 2”</p> <p>As described above</p>   | <p><b>Out-of-home placement</b></p> <ul style="list-style-type: none"> <li>• Proportion entering care</li> </ul> <p><b>Child Outcomes</b></p>                                 | <p>This study replicated the approach to generating a control group used in Forrester et al. (2008).</p>   |

| Reference  | Study Design   | Intervention and Comparator  | Relevant outcomes   | Additional notes / Comments on applicability  |
|--|--|--|---|---|
|  | <p><b>Enrolment period:</b><br/>Not reported</p> <p><b>Follow-up:</b><br/>Average of 5.6 years</p> | <p><b>Comparator:</b></p> <p>Information on standard care provided to families when capacity constraints prevented access to “Option 2” is very limited.</p>   | <ul style="list-style-type: none"> <li>Strengths and Difficulties Questionnaire (SDQ)</li> </ul> <p><b>Parent Outcomes</b></p> <ul style="list-style-type: none"> <li>General Health Questionnaire</li> <li>Maudsley Addiction Profile</li> </ul> <p><b>Family Functioning</b></p> <ul style="list-style-type: none"> <li>Family Environment Scale</li> </ul>             |   |
| Thom et al. (2014)   | <p>Uncontrolled before-and-after study</p> <p>Multicentre (n=3, Wales)</p>                         | <p><b>Intervention:</b></p> <p>“Integrated Family Support Service”</p> <p>IFSS was implemented with learning from delivery of Option 2 in Wales. It is aimed at families where parental substance misuse is a concern and children are in need of protection. The service also accepts referrals where a child may be able to return home and for expectant parents.</p> <p>The IFS have an initial phase of intensive intervention where staff work directly with families to identify how needs can be addressed and then move into a second phase where on-going support from other services is co-ordinated by the team, with further intensive direct support if needed.</p> <p>The IFSS also has a wider remit to provide advice and training to other services on complex family needs</p> <p>No comparator</p> | <p><b>Child Outcomes</b></p> <ul style="list-style-type: none"> <li>Strengths and Difficulties Questionnaire (SDQ)</li> </ul> <p><b>Parent Outcomes</b></p> <ul style="list-style-type: none"> <li>Warwick-Edinburgh Mental Well-being Scale (WEMWBS)</li> </ul> <p><b>Family Functioning</b></p> <ul style="list-style-type: none"> <li>Goal Attainment Scale</li> </ul> | <p>This study evaluated three services that acted as pilot sites before a wider introduction of services to cover the whole of Wales.</p> <p>The evaluation also intended to measure unauthorised absences from school as a proxy for stable home environment, but this measure is not reported due to the small sample size and lack of clear trend in findings.</p> |
| Abbreviations - IFSS: intensive family support service, SDQ: Strengths and Difficulties Questionnaire, WEMWBS: Warwick-Edinburgh Mental Well-being Scale |  |  |   |   |

## 5.1 Rate of out-of-home placement

A recent systematic review and meta-analysis reported on reductions in out-of-home placements across a series of follow ups.

When analysed at the child-level, there was a significant reduction in children entering care associated with IFPP at 3-month (risk ratio [RR] = 0.57; 95% confidence interval [CI], 0.35 to 0.93), 6-month (RR = 0.51; 95% CI, 0.27 to 0.96), 12-month (RR = 0.60; 95% CI, 0.48 to 0.76), and 24-month follow up (RR = 0.51; 95% CI, 0.30 to 0.87) but not for studies with follow-ups of longer than 48 months. When analyses were completed at the family-level at the same follow-ups, significant reductions in out-of-home placements were not found.

Several of the studies included in this EAR due to their generalisability to Wales also reported the rate of out-of-home placement. These findings are reported here but it should be noted that these studies are included in the analyses outlined above and there is potential for double counting if this is not kept in mind for interpretation. In addition, it should be noted that some of the outcomes reflect entry into public care as opposed to wider forms of out-of-home placement.

Across these studies, Biehal (2005) and Forrester et al. (2016) report that significantly fewer children who received IFPP entered care compared to a control group (25% versus 50%,  $p = 0.008$  and 8% versus 44%,  $p = 0.001$ , respectively). Forrester et al. (2008) did not find significant reductions and Brandon & Connolly (2006) do not report statistical tests for this outcome.

## 5.2 Duration and nature of out-of-home placement

Several of the studies also reported on other outcomes relating to out-of-home placement, including duration of time in care, entry to longer term care, and time before entering care.

Biehal (2005) and Forrester et al. (2016) reported on the proportion of children who entered long-term or permanent care and both studies report lower rates for families who had received IFPP compared to control (6% versus 29%,  $p = 0.004$  and 7% versus 41%,  $p = 0.03$ , respectively).

In addition, (Forrester et al. 2008) reported that the number of children at home at follow-up was significantly higher (68% versus 56%  $p = 0.04$ ) and the number of days spent in care was significantly lower (410 versus 603 days,  $p < 0.01$ ) for those who received IFPP. However, they did not find a significant difference in days to care entry across the groups.

## 5.3 Child outcomes

Several studies reported on outcomes for children according to measures of emotional and behavioural needs, most commonly the Strengths and Difficulties Questionnaire (SDQ), and other measures of well-being.

For emotional and behavioural needs, Biehal (2005) reported that the mean changes in scores on the SDQ (mean difference [MD] = -0.67; 95% CI -2.65 to 1.32;  $p = 0.51$ ), Severity of Difficulties Scale (MD = 0.12; 95% CI -11.52 to 11.76;  $p = 0.98$ ), and Cantril's Ladder (odds ratio [OR] = 1.14; 95% CI, 0.18 to 7.28) were not significantly different between those who received IFPP and those in a control group. Similarly, Forrester et al. (2016) reported that the proportion of children with high levels of need according to a cut-off on the SDQ did not differ between groups at follow up (OR = 1.14; 95%CI 0.18 to 7.28).

Thom et al. (2014) reported that there was a reduction in mean score on the SDQ from 13.2 to 10.5 after the IFPP was delivered but this study had no control group and statistical tests are not reported.

## 5.4 Parental outcomes

Several studies reported outcomes relating to parents across a range of measures.

For parental distress, Biehal (2005) reported no significant differences on mean scores on the 12-item General Health Questionnaire (GHQ-12) between those who received IFPP versus those who did not (MD = 0.69; 95% CI -0.85 to 2.22;  $p = 0.38$ ). However, on the same measure, Forrester et al. (2016) reported a significant reduction in those scoring over a cut-off indicating heightened distress (OR = 0.15; 95% CI 0.03 to 0.85). Brandon & Connolly (2006) reported a reduction in cases above an unspecified cut-off on the Parental Stress Index from 77% to 65% post-intervention, but statistical tests are not reported.

Thom et al. (2014) reported on parental wellbeing using the Warwick-Edinburgh Mental Well-being Scale (WEMWBS). They found that there were improvements from a mean of 45.13 to 51.44 over the course of the study. However, this study had no control group and statistical tests are not reported.

One study also reported significant reductions in substance misuse for families receiving IFPP compared to control (OR = 12.14; 95% CI 1.19 to 123.62). However, the confidence intervals demonstrate there was a high level of uncertainty around the effect, and it is unclear how the outcome was defined (Forrester et al. 2016).

## 5.5 Family functioning

Two studies reported on different measures of family functioning.

Biehal (2005) did not report significant differences between groups on mean change in Family Assessment Device (FAD) score (MD = -0.14; 95% CI -0.32 to 0.04;  $p = 0.14$ ). Similarly, Forrester et al. (2016) did not find significant difference in the proportion of families with poor functioning based on a cut-off for the Family Environment Scale (FAS) (OR = 1.50; 95% CI 0.29 to 7.75).

**Table 3. Intensive family preservation programmes compared to control: outcomes**

| Outcome   | Evidence source(s)      | Number of studies and participants                          | Absolute effect  | Relative effect [95% CI] (interpretation)                 |
|---|-------------------------|---|--|---|
| <b>Rate of out-of-home placement</b>                    |                         |   |  |   |
| Child-level - 3-month follow-up                         | Bezczky et al. (2020)   | 2 non-randomised controlled trials, 492 children            | IFPP = 21/246 (8.5%)<br>Control = 37/246 (15.0%)           | RR = 0.57 (95% CI 0.35 to 0.93)<br><b>Favours IFPP</b>    |
| Child-level - 6-month follow-up                         | Bezczky et al. (2020)   | 2 RCTs, 3 non-randomised controlled trials, 1,616 children  | IFPP = 157/866 (18.1%)<br>Control = 232/750 (30.9%)        | RR = 0.51 (95% CI 0.27 to 0.97)<br><b>Favours IFPP</b>    |
| Child-level - 12-month follow-up                        | Bezczky et al. (2020)   | 2 RCTs, 8 non-randomised controlled trials, 28,368 children | IFPP = 488/1,809 (27.0%)<br>Control = 7,357/26,559 (27.7%) | RR = 0.60 (95% CI 0.48 to 0.76)<br><b>Favours IFPP</b>    |
| Child-level - 24-month follow-up                        | Bezczky et al. (2020)   | 1 RCT, 2 non-randomised controlled trials, 562 children     | IFPP = 51/308 (16.6%)<br>Control = 81/254 (31.9%)          | RR = 0.51 (95% CI 0.30 to 0.87)<br><b>Favours IFPP</b>    |
| Child-level - 48-month+ follow-up                       | Bezczky et al. (2020)   | 2 studies (design and number of participants not reported)  | Not reported   | RR = 0.63 (95% CI 0.36 to 1.12)<br><b>Favours neither</b> |
| Family-level - 1-month follow-up                        | Bezczky et al. (2020)   | Not reported  | Not reported   | RR = 0.78 (95% CI 0.57 to 1.06)<br><b>Favours neither</b> |
| Family-level - 3-month follow-up                        | Bezczky et al. (2020)   | Not reported  | Not reported   | RR = 0.71 (95% CI 0.46 to 1.10)<br><b>Favours neither</b> |
| Family-level - 6-month follow-up                        | Bezczky et al. (2020)   | Not reported  | Not reported   | RR = 0.97 (95% CI 0.77 to 1.22)<br><b>Favours neither</b> |
| Family-level - 12-month follow-up                       | Bezczky et al. (2020)   | Not reported  | Not reported   | RR = 1.03 (95% CI 0.86 to 1.23)<br><b>Favours neither</b> |
| Family-level - 18-month follow-up                       | Bezczky et al. (2020)   | Not reported  | Not reported   | RR = 1.13 (95% CI 0.95 to 1.33)<br><b>Favours neither</b> |
| <b>Rate of out-of-home placement (UK-based studies)</b> |                         |   |  |   |
| Entry to care   | Biehal (2005)           | 1 non-randomised controlled trial, 99 children              | IFPP = 25%<br>Control = 50%                                | p = 0.008<br><b>Favours IFPP</b>                          |
| Entry to care   | Forrester et al. (2008) | 1 non-randomised controlled trial, 368 children             | IFPP = 43%<br>Control = 44%                                | p = 0.84<br><b>Favours neither</b>                        |

| Outcome  | Evidence source(s)        | Number of studies and participants                | Absolute effect                             | Relative effect [95% CI] (interpretation)                                |
|--|---------------------------|---|---|--|
| Entry into public care   | Brandon & Connolly (2006) | 1 non-randomised controlled trial, 86 families    | IFPP = 20/57 (35%)<br>Control = 12/29 (41%) | Statistical tests not reported   |
| Entry into public care   | Forrester et al. (2016)   | 1 non-randomised controlled trial, 84 children    | IFPP = 9/52 (8%)<br>Control = 14/32 (44%)   | p = 0.001<br><b>Favours IFPP</b>   |
| <b>Other out-of-home placement outcomes</b>  |                           |   |   |  |
| Entry to permanent care  | Biehal (2005)             | 1 non-randomised controlled trial, 99 children    | IFPP = 6%<br>Control = 29%                  | p = 0.004<br><b>Favours IFPP</b>   |
| Permanently moved  | Forrester et al. (2016)   | 1 non-randomised controlled trial, 84 children    | IFPP = 9/52 (17%)<br>Control = 13/32 (41%)  | p = 0.03<br><b>Favours IFPP</b>  |
| At home at follow-up   | Forrester et al. (2008)   | 1 non-randomised controlled trial, 368 children   | IFPP = 68%<br>Control = 56%                 | p = 0.04<br><b>Favours IFPP</b>  |
| Days in care   | Forrester et al. (2008)   | 1 non-randomised controlled trial, 95 children    | IFPP = 410<br>Control = 603                 | p < 0.01<br><b>Favours IFPP</b>  |
| Days to care entry   | Forrester et al. (2008)   | 1 non-randomised controlled trial, 141 children   | IFPP = 150<br>Control = 126                 | p = 0.47<br><b>Favours neither</b>                                       |
| <b>Child outcomes</b>  |                           |   |   |  |
| Emotional and behavioural need (mean change in score on SDQ)   | Biehal (2005)             | 1 non-randomised controlled trial, 134 parents    | Not reported                                | MD = -0.67<br>(95% CI -2.65 to 1.32; p = 0.51)<br><b>Favours neither</b> |
| Emotional and behavioural need (proportion above cut-off; scores 14 or above on SDQ indicating some or high needs) | Forrester et al. (2016)   | 1 non-randomised controlled trial, 20 parents     | IFPP = 6/13 (46%)<br>Control = 3/7 (43%)    | OR = 1.14<br>(95% CI 0.18 to 7.28)<br><b>Favours neither</b>             |
| Emotional and behavioural need (mean change on SDQ scale)  | Thom et al. (2014)        | 1 before-and-after uncontrolled trial, 33 parents | Pre = 13.2<br>Post = 10.5                   | Statistical tests not reported   |
| Emotional and behavioural need (mean changes on Severity of Difficulties scale)                                    | Biehal (2005)             | 1 non-randomised controlled trial, 99 children    | Not reported                                | MD = 0.11<br>(95% CI -3.05 to 2.83; p = 0.98)<br><b>Favours neither</b>  |

| Outcome  | Evidence source(s)        | Number of studies and participants   | Absolute effect                            | Relative effect [95% CI] (interpretation)                              |
|--|---------------------------|--|--|--|
| Well-being (mean change in Cantril's Ladder)   | Biehal (2005)             | 1 non-randomised controlled trial, 99 children                             | Not reported                               | MD = 0.12 (95% CI -11.52 to 11.76; p = 0.98)<br><b>Favours neither</b> |
| <b>Parental outcomes</b>   |                           |  |  |  |
| Parental wellbeing (mean scores on Warwick-Edinburgh Mental Well-being Scale)  | Thom et al. (2014)        | 1 before-and-after uncontrolled trial, number of participants not reported | Pre = 45.13<br>Post = 51.44                | Statistical tests not reported   |
| Parental distress (mean change on GHQ-12)  | Biehal (2005)             | 1 non-randomised controlled trial, 99 parents                              | Not reported                               | MD = 0.69 (95% CI -0.85 to 2.22; p = 0.38)<br><b>Favours neither</b>   |
| Parental distress (proportion above unspecified cut-off parental stress index)   | Brandon & Connolly (2006) | 1 before-and-after uncontrolled trial, number of participants not reported | 77%<br>65%                                 | Statistical tests not reported   |
| Parental distress (proportion above cut-off; score of 11+ on GHQ-12)   | Forrester et al. (2016)   | 1 non-randomised controlled trial, 31 parents                              | IFPP = 8/18 (44%)<br>Control = 11/13 (85%) | OR = 0.15 (95% CI 0.03 to 0.85)<br><b>Favours IFPP</b>                 |
| Reduction in substance misuse (definition unclear)   | Forrester et al. (2016)   | 1 non-randomised controlled trial, 30 parents                              | IFPP = 17/18 (94%)<br>Control = 7/12 (58%) | OR = 12.14 (95% CI 1.19 to 123.62)<br><b>Favours IFPP</b>              |
| <b>Family outcomes</b>   |                           |  |  |  |
| Family Functioning (mean change in FAD scale)  | Biehal (2005)             | 1 non-randomised controlled trial, 141 children/parents                    | Not reported                               | MD = -0.14 (95% CI -0.32 to 0.04; p = 0.14)<br><b>Favours neither</b>  |
| Family Functioning (proportion above cut-off; score of 9 or below in FES scale indicating poor functioning)  | Forrester et al. (2016)   | 1 non-randomised controlled trial, 30 parents                              | IFPP = 7/14 (50%)<br>Control = 6/10 (60%)  | OR = 1.50 (95% CI 0.29 to 7.75)<br><b>Favours neither</b>              |
| It is important to note that the rate of out-of-home placement for UK studies is reported within the meta-analysis and is reported separately in this table due to the potential for greater generalisability to Wales. Due to this, there is a potential for double counting and this should be considered during interpretation of findings. |                           |  |  |  |

## 5.6 Ongoing studies

HTW identified one ongoing study that is relevant to the effectiveness of IFPP (Morris et al. 2021). This study is currently underway in Australia and uses an uncontrolled before-and-after study with a qualitative component to explore families' perspectives on the intervention and issues relating to implementation.

**Table 4. Summary of ongoing primary studies**

| Study information   | Status  | Research question & outcome measures   |
|---|---|--|
| <p><b>Registration:</b><br/>Not registered</p> <p><b>Country:</b><br/>Australia</p> <p><b>Design:</b><br/>Uncontrolled before-and-after study including mixed methods process evaluation</p> <p><b>Target recruitment:</b><br/>123 families</p> <p><b>Follow-up:</b><br/>6 months</p> | <p><b>Recruitment Status:</b><br/>Not known</p> <p><b>Last updated:</b><br/>Protocol published September 2021</p> | <p>To assess the effectiveness of intensive family preservation and explore issues relating to implementation</p> <p><b>Population:</b> Families with children who are vulnerable to removal from the home due to a child protection assessment of risk, have children already in out-of-home care (OOHC), or are pregnant and have had 'unborn' reports to child protection</p> <p><b>Intervention:</b> Family Preservation and Reunification Service (home visits and regular phone calls each week for period up to 6 months)</p> <p><b>Comparator:</b> None</p> <p><b>Relevant Outcome Measures:</b> parental knowledge, skills and confidence; family safety and home environment; child development and behaviour; connection to services' outcomes relating to child protection including out-of-home placement</p> |

## 5.7 Certainty of the evidence

- There appears to be a large body of evidence examining the effectiveness of IFPP in different settings. However, this evidence predominately stems from non-randomised controlled studies. Where RCTs are available, they were often conducted a long time ago and none had been conducted outside of the USA. The non-randomised studies have varying quality and they rely on methods of generating control groups that introduce a high risk of bias. For example, where families who are particularly likely to benefit receive an intervention and those who are less likely to benefit do not. This means that despite the presence of a meta-analysis for the key outcome of out-of-home placement, there is a large level of uncertainty about the accuracy of estimated effects.
- There are a large range of approaches to delivering IFPP with varying lengths of delivery, levels of intensity, and types of direct and indirect interventions delivered to families. This is reflected within the identified evidence and there is uncertainty to which approaches may be effective or most effective. However, there does appear to be a core model of IFPP that: 1) targets a period of crisis. 2) has an intensive period of around one month, 3) provides support in the home with additional support available at other times, and 4) delivered by keyworkers with a limited caseload. Evidence from the UK largely aligns with this core model.
- IFPP may be suitable for families who are experiencing crises for a range of reasons and eligibility for IFPP may be highly dependent on available resources and the context within which they are delivered. Some included studies appeared to focus on families in crisis for specific reasons and for these studies, findings may not be generalisable to other reasons for crisis. For studies who included the population of families who were referred to IFPP, there

was limited reporting of services scope or criteria for acceptance, and this should be considered during interpretation of findings.

- Social care services can differ to a large extent across settings and evidence from other settings may not be generalisable to Wales. This can be due to differences in provision of standard care that influence how successful an additional intervention can be, or due to how social care services are designed and relate to other agencies. Only a limited number of studies of IFPP were identified in the Welsh setting and it is unclear how generalisable results from other countries are. For health interventions, there are a number of cases where findings on the effectiveness of interventions in the USA are not replicated in the UK, due to universal health coverage and availability of more services as standard care. An expert highlighted that the Family Nurse Partnership is a potentially relevant example of this in a linked population. Further, the most recent study in the UK setting was published in 2014. It is unclear whether changes to social care services and the general context over time would impact the generalisability of findings to the present.

## 6. Cost effectiveness

### 6.1 Economic literature review

We conducted a rapid systematic literature review to answer the following research question: what is the cost-effectiveness of intensive family preservation programmes for families in crisis? Appendix 4 summarises the selection of articles for inclusion in the evidence review. The titles and abstracts of 1,050 records identified in the search for this research question were screened and 60 records were deemed potentially relevant. The full texts of these studies were reviewed against the inclusion/exclusion criteria and 58 studies were excluded.

The majority of studies were excluded as they were not a relevant topic area (n = 36), a number were excluded as there were no mention of costs (n = 8), and five studies were excluded due to age, as the costs are unlikely to be applicable (any studies conducted before 2000) (n = 5). Other reasons for exclusion included duplicate articles and the study being a meta-analysis rather than a cost analysis.

The remaining two included studies are summarised in Table 5. The first study is a cost analysis of Option 2 - a form of IFPP whereby all parents have substance misuse problems - conducted by Forrester et al. (2008). This study was deemed directly applicable to the research question; however, only considered those families with substance misuse, and so may not be representative of the wider population. As all families are assessed for eligibility but the programme has no waiting list, a natural control group is formed by those that are not able to access the programme due to capacity constraints.

Outcomes of the study included whether a child entered care, whether a child was at home at the end of the study, the number of days in care, the number of days to care entry, and direct costs of placement for children in care. Although the study includes the cost of the intervention and costs of direct placement, many costs are omitted, such as those linked to placement identification and support for local authority placements and social worker allocation costs.

The study calculated that the cost of Option 2 was £2,195 per child, based on the total grant for the service, and that savings in care costs were £3,373 over an average follow up period of 3.5 years, resulting in a total overall saving of £1,178 per child under the Option 2 approach. Outcomes which had statistical significance in the differences between the two approaches were the proportion of children at home at the end of the study and the number of days in care (Table 3).

The major limitations of this study include the lack of randomisation into intervention and control groups, no full cost-effectiveness analysis being undertaken, and no evaluation of family or child welfare being considered.

The second identified paper was a cost study conducted in the US, looking at a number of different IFPP (Huebner et al. (2012)). The included IFPP were all based on the Homebuilders model and were intended for families with imminent risk of a child being removed from the home, with social workers available to all families in the intervention arm 24/7. Although this study is from a US perspective, it includes various forms of IFPP in the wider population, and so has been included in addition to Forrester et al. (2008).

The aim of the study was to assess whether IFPP were effective in terms of child safety, entry into, and patterns of care, and to evaluate the cost effectiveness of the intervention. The study used a number of sources to evaluate the efficacy of the intervention, including the North Carolina Family Assessment Scale (NCFAS), which is scored on a six-point scale from -3 (serious problems) to +2 (clear strength), and a number of administrative datasets, one of which included the results of the Continuous Quality Assessment (CQA) which was completed by child protective

service (CPS) workers. The leading author conducted a cost study which provided the average cost of out-of-home care (OOHC) which was referenced within Huebner et al. (2012).

The study found that on average, IFPP children had fewer placement moves, spent less time in OOHC (118.7 fewer days) and were more often reunited with family than those not receiving the intervention. However, this study did not have a strict control group, and so compared a cohort of children 6 months before, during and 6 months after the study period.

These efficacy findings translated to total cost savings of \$18,482,804 (≈£13,108,725) over a one-year period, comprising \$15,550,528 (≈£11,029,041) saved by 824 children diverting OOHC, and \$2,932,276 (≈£2,079,684) saved by 715 children having a shorter duration of time spent in OOHC.

The study is associated with a number of limitations for use in our context, firstly that the study relates to findings in the US, which may have limited applicability to a Welsh setting. In addition, there is no randomisation in the study, rather the control group is formed from a database of children and families not receiving the intervention. Furthermore, the cost analysis omits a number of costs, and a full cost-effectiveness evaluation has not been conducted. However, the study provides some insight into the benefits of IFPP interventions.

**Table 5. Summary of included economic studies: Forrester et al. (2008) & Huebner et al. (2012)**

| Study details   | Study population and design   | Data sources  | Results   | Quality assessment   |
|---|---|---|---|--|
| <p><b>Author and year:</b><br/>Forrester et al. (2008)</p> <p><b>Country:</b><br/>UK</p> <p><b>Type of economic analysis:</b><br/>Cost analysis</p> <p><b>Perspective:</b><br/>Personal social services - local authority (direct placement costs)</p> <p><b>Currency:</b><br/>GBP</p> <p><b>Price year:</b><br/>2008</p> <p><b>Time horizon:</b><br/>Follow up period of average 3.5 years</p> | <p><b>Population</b><br/>Families with substance misuse problems where one or more children are about to be taken into care.<br/>Average age of children – 6.1 years in the control group, and 7.3 years in IFPP group.<br/>Average number of children per family – 2.6 in control arm and 3.4 in IFPP arm.</p> <p><b>Interventions</b><br/>Option 2 – intervention at crisis point when the child is about to enter care. Social workers are on call 24 hours a day, 7 days a week for 4 weeks.</p> <p><b>Comparator</b><br/>Those families who cannot access the service due to capacity constraints (no waiting list is utilised for the service).</p> <p><b>Study design</b><br/>Controlled before-and-after study with 4 outcomes, one focusing on the costs of placements</p> | <p><b>Source of resource use and cost data:</b><br/>Costs for placement as recorded by local authority. Costs of Option 2 were calculated using their annual grant.<br/>Note that Option 2 is specific to families with substance misuse and may not represent the entire “at risk” population.</p> | <p><b>Base case costs</b><br/>Option 2 - £13,558<br/>Comparison - £16,931<br/>Savings of £3,373 over an average follow up of 3.5 years.</p> | <p><b>Applicability</b><br/>Directly applicable – UK setting and correct intervention.<br/>Note that Option 2 is specific to families with substance misuse and may not represent the entire “at risk” population.</p> <p><b>Limitations</b><br/>Costs associated with placement as recorded by the local authority included only – costs linked to placement identification and support were not included, nor were social worker costs.</p> <p>Not a full cost analysis. The omission of a number of costs could result in this being a significant underestimate of the economic impact.</p> <p>Only looked at care entry – not family or child welfare.</p> <p>No measurement of resource use on education, health, criminal justice, adult substance misuse or other resources have been evaluated.</p> <p>Lack of randomisation in the comparison and intervention groups.</p> <p>Children not matching the eligibility criteria of the study were included in the intervention group but means that families not receiving the service are considered in results.</p> |

| Study details  | Study population and design   | Data sources   | Results  | Quality assessment   |
|--|---|--|--|--|
| <p><b>Author and year:</b><br/>Huebner et al. (2012)</p> <p><b>Country:</b><br/>USA</p> <p><b>Type of economic analysis:</b><br/>Cost analysis</p> <p><b>Perspective:</b><br/>Personal social services</p> <p><b>Currency:</b><br/>USD</p> <p><b>Price year:</b><br/>2007</p> <p><b>Time horizon:</b><br/>1 year follow up</p>   | <p><b>Population</b><br/>Families with imminent risk of having at least one child placed in out-of-home care.</p> <p><b>Interventions</b><br/>Family preservation programs (IFPP, FRS, FPS and FACTS). Case workers are available 24/7 to intervene intensively using multiple intervention sessions in short periods of time.</p> <p><b>Comparator</b><br/>A cohort that did not receive the intervention.</p> <p><b>Study design</b><br/>Controlled before and after study for families receiving IFPP compared to state administrative data.</p> | <p><b>Source of resource use and cost data:</b><br/>Avoidance of out-of-home care (OOHC) and a shorter duration of stay were derived from this study. The average duration of OOHC was derived from the entry cohort of 2001, evaluated in January 2010. Average cost of OOHC referenced within Huebner et al. (2012).</p> | <p><b>Base case results</b></p> <p><b>Costs</b><br/>Costs avoided due to OOHC diversion - \$15,550,528 (£11,029,041)<br/>Costs avoided due to fewer days in OOHC - \$2,932,276 (£2,079,684)<br/>Total cost avoidance - \$18,482,804 (£13,108,725).</p> | <p><b>Applicability</b><br/>Partially applicable- the IFPP services include IFPP but are not limited to, and the study is based in the US, where the homebuilder's model was found to be not as effective as it has proven in the UK.</p> <p><b>Limitations</b><br/>Not from a randomised study, this study used retrospective data to assess differences between those who received and did not receive the intervention.</p> <p>Costs for children 7 years and younger were used for the analysis, acknowledging that older children cost more.</p> <p>Costs do not include staff time, the costs of court hearings, the costs for child services such as medical and dental care.</p> <p>Not a full cost-effectiveness evaluation - only focuses on costs saved.</p> <p>Only looked at care entry - not family or child welfare.</p> <p>Data from the provider collected data contained missing data, duplicate data, and other integrated data, which were resolved as much as possible.</p> <p>Some of the definitions for the variables included in the study are ambiguous.</p> |
| <p>Abbreviations - CPS: child protective service; CQA: Continuous Quality Assessment; FACTS: Families and Children Together Safely; FPS: Family preservation services; FRS: family reunification services; GBP: great British pounds; IFPP: intensive family preservation programmes; NCFAS: National Family Preservation Network; OOHC: out-of-home care; USD: United States dollars.</p> |   |  |  |  |

## 6.2 HTW cost-consequence analysis

An economic analysis was developed to estimate the costs and outcomes of IFPP when used to assist families who are at imminent risk of children being removed from the home. This de-novo analysis aims to capture the entire “at-risk” population that could be served with IFPP and reflects the best effectiveness evidence identified.

The economic model compares IFPP to the situation where no such intervention is used. IFPP are intensive in-home intervention services designed to aid families at imminent risk of children being removed from the home. A caseworker is assigned to the family and will be available 24 hours a day, seven days a week, for a period of four to six weeks. Each caseworker has a small caseload of two to three families to enable them to provide an intensive service. Caseworkers are able to help in terms of skill development, therapy, and material help.

A Markov model was developed using Microsoft Excel to comprise predictions of out-of-home care for a cohort of children eligible for IFPP. The model structure is a simplification of true events and follows a general pathway of children entering care in the UK. Due to a lack of identified evidence, the model only runs over a time horizon of two years.

The model operates an initial 4.5-month cycle, and then captures outcomes at one and two years. At model initiation, families in the intervention arm are assumed to receive the four to six week intervention. Families who do not receive the intervention are modelled similarly, but without costs and resource use associated with IFPP. Following this, children are either placed in out-of-home care or remain at home. This is assumed to occur at 4.5 months due to the data used to inform the analysis. If children are not removed from their home environment, they are assumed to remain at home for the remainder of the modelled time horizon.

For children who are placed in out-of-home care, they will either be placed in foster care, residential care, kinship care or returned back to their family. If children are returned back home, they are subject to a risk per cycle of being re-entered to care, else they will remain at home for the remainder of the modelled time horizon. For children who are placed into care, at the end of the modelled time horizon, a proportion will be adopted.

Base case results of the analysis show that in a cohort of 1,000 children that receive the IFPP intervention, 118 fewer children are taken into out-of-home care compared to a cohort that don't receive the intervention. Despite an increased cost associated with IFPP, the savings from a reduction in care results in average cost savings of £12,171 per child. It should be noted that despite a reduction in out-of-home placements and cost savings associated with IFPP, the impact on children's welfare has not been considered due to a lack of evidence.

The analysis considered parental outcomes in terms of a reduction in parental psychological distress, and a reduction in families with substance misuse issues. Results demonstrate that in an assumed 474 families that receive IFPP, 187 more families see a reduction in parental psychological distress compared to those that do not receive the intervention.

Of 474 families, 238 had substance misuse issues at baseline. For those that received IFPP, only 13 families had substance misuse issues following the intervention period, compared to 99 who did not receive the intervention: a difference of 86 families.

Full details of the economic analysis can be found in Appendix 6.

## 7. Organisational considerations

In Wales, IFPP should be delivered by local authorities within integrated family support teams (IFSTs). However, during scoping work for this topic, experts highlighted that it is unclear whether these services are currently delivered according to the IFPP core model with highly intensive services, delivered over short time periods, by workers with small caseloads. HTW attempted to identify information on IFSTs across Wales to assess whether services were adhering to this model. However, it was not possible to identify available sources of information for each of these services due to the complex pattern of commissioning and responsibility and number of services. In particular, some services are delivered within the boundaries of a regional partnership board (e.g., Cardiff and the Vale of Glamorgan), some services are delivered by a subset of local authorities within a regional partnership board area (e.g., Rhondda Cynon Taf and Merthyr Tydfil) or by individual local authorities (e.g., Newport), and others are delivered across Regional Partnership Board boundaries (e.g., Western Bay).

HTW was able to identify several documents which provide some more detailed information on the delivery of IFSTs. Annual reports for Cardiff and The Vale of Glamorgan IFSTs state that specialists work with 15 families per year and hold only two families on their caseload during the intensive phase of the programme (Cardiff and the Vale of Glamorgan IFST 2019, Cardiff and the Vale of Glamorgan IFST 2022). This approach is supported by reporting on the size of the team and the number of families allocated to the service. The Cwm Taf IFST provide less information on their model of delivery but information on their staffing and numbers accepted suggest a broadly similar picture to Cardiff and the Vale of Glamorgan (Cwm Taf IFST 2018). Furthermore, the evaluation by Thom et al. (2014) supports the notion that at least at inception and during first years of operation at the pilot sites, a high fidelity to the core model for IFPP (i.e., highly intensive support over a short time period).

For these services, at least, this suggests that the core model for IFPP, with highly intensive intervention over a short time-period is being adhered to in Wales. This is further supported by information that both services decline a large number of appropriate referrals due to a lack of resources to provide intervention in a way that would be true to the core model for IFPP (Cwm Taf IFST 2018, Thom et al. 2014, Cardiff and the Vale of Glamorgan IFST 2019, Cardiff and the Vale of Glamorgan IFST 2022). Experts who had knowledge of services within Wales also indicated that this aligns with their understanding of wider delivery with challenges relating to funding and resourcing.

## 8. Children and parent's perspectives

HTW's Patient and Public Involvement Standing Group recommend that children and parent's perspective should be captured by identification of appropriate studies within the effectiveness literature search and during a targeted PPI search on perspectives on wider engagement with children's services during a period of crisis and where a child may be at risk of entering care.

### 8.1 Evidence from published sources

#### 8.1.1 On intensive family preservation programmes

During the literature search for evidence on effectiveness, we identified six studies which provided information on children and parent's perspectives on IFPP specifically (Brandon & Connolly 2006, Callejas et al. 2021, Fogarty et al. 2022, Forrester et al. 2008, Forrester et al. 2016, Thom et al. 2014).

Brandon & Connolly (2006) interviewed a sub-set of parents in their study to explore their views on engaging with the IFPP. They report that all parents interviewed found the programme helpful and reported that the relationships formed with programme staff were different to those with usual services and allowed greater trust and engagement. Some parents reported that the intensity of the programme was helpful, but others suggested it was too onerous. It is important that only parents who completed the programme were included in the qualitative aspect of the study and the perspectives of those who did engage with the programme or dropped out early are not captured.

Callejas et al. (2021) interviewed eight mothers in Florida in the US who had experience of receiving an IFPP due to concerns about child welfare. Mothers felt that financial and material support was the most beneficial aspect of IFPP, and some noted that direct therapeutic interventions for themselves and their children were helpful. Despite mothers reporting that services were helpful in some respects, there was a perception that these services were coercive, and families had to “go along” with them due to the risk of children entering care. Some mothers reported that this feeling of coercion was associated with demeaning or disrespectful behaviour by individual staff but was also cited where mothers reported a positive view of staff. Further, mothers noted that their situation had to reach a crisis before these services were provided and questioned whether services understood the complexity of people’s lives and the circumstances that had led them to contact with an IFPP.

Forrester et al. (2008) interviewed parents in their study conducted in a Welsh city. Parents reported that difficult circumstances had triggered involvement with the programme and that involvement helped resolve issues. The authors identified several key components of the programme which helped achieve this success. These included having a non-judgemental and understanding approach, having good open communication between workers and families, having high levels of availability and frequent contacts, suggesting helpful strategies, and providing practical support, supporting with substance problems, and intervening in family relationships.

This study also completed interviews with children to explore their views of the programme (Forrester et al. 2008). Most children felt their confidence had been improved by the programme and this had led to positive impacts for school, friendships, and interactions with other services. They also reported that the programme has improved relationships with parents through noticeable changes in behaviour and parenting approaches.

Forrester et al. (2016) reported similar findings from another study completed in Wales. However, they were also able to report on issues where the programme did not succeed in engaging parents so much. For this group of families, parents reported they were preoccupied by the fear of losing their children or struggling with severe substance misuses problems and the programme could not overcome this. In some cases, parents suggested that the worker was not helpful, and the approaches used did not reflect the complexity of their circumstances.

Thom et al. (2014) also included interviews with parents in their evaluation. Their findings broadly replicate those described above and suggest IFPP are welcomed by families during a crisis and that the intensity of the intervention allowed an approach which was more likely to engage and address problems that families faced. Families did highlight though that they felt the programme was too short and some faced setbacks after the programme ended because long term solutions were not in place.

## 8.1.2 On interactions with wider children's services

During a targeted literature search for studies on wider interactions with children's services, HTW identified two systematic reviews of qualitative studies which examined children's (Wilson et al. 2020) and parents' perspectives (Bekaert et al. 2021).

Wilson et al. (2020) aimed to explore children's experiences and perspectives of coming into contact with children's services. Using a systematic review, they identified 39 studies for inclusion with a meta-synthesis. Fifteen of these studies were conducted in the UK and the majority were from other European countries. The study includes themes on first contacts with children's services. However, in this report we focus on experiences related to out-of-home placement and more general interaction with professionals.

The study highlights that removal from the home is a complex situation and children have differing and conflicting perceptions. Some children thought that removal from the home was the best solution for them and was reported to have led to increased feelings of safety, home for the future, and improved living conditions. This appeared to be particularly true where someone with whom they had a trusting relationship had clearly explained what was happening and why. However, children also experienced a sense of loss at being removed from their families. This included feeling isolated, lonely, and helpless and children missed their parents and siblings, friends, and communities. Children also reported difficulties with the lack of permanence and stability and uncertainty regarding the future that are associated with entry to the care system and some reported that staff were trying to turn them into someone they were not. Further, some children highlighted that care provided by children's services did not feel safer than their home environments to them.

More broadly, the study highlights that children's contact with children's services has an impact on their sense of self and social identity. Children reported that children's services imposed certain roles on them, ranging from more minor frustration like being forced to play children's games to more serious issues around feeling heard within the process and having their views and desires listened to and acted on. Children also described having a sense of self that saw them as strong and independent individuals who had survived adverse experiences and this conflicted with professionals who saw them as vulnerable and helpless, and in worse cases worthless or bad. The feeling that professionals interacted with them in a detached and impersonal way contributed to these feeling and children reported needing to suppress difficult emotions and hide negative or risky behaviours from adults.

Finally, there was a strong sense that children felt stigma and shame due to their involvement with children's services. Children reported that they had lower status and were placed at the margins of society both due to non-specific factors, and professionals disrespecting them and their families. This led some children to report hiding their contact with services and placement in care from their peers and experiencing bullying where this was known. Children reported that this could be avoided if they felt well understood and supported by teachers and elsewhere within the school environment.

Bekaert et al. (2021) completed a systematic review aimed at exploring parents' and other family member's perspectives on contact with children's services and social care professionals. They identified 35 studies that were then included in a meta-synthesis of narrative themes. These studies were mostly set in Europe, with 12 conducted in the UK. The study identifies three key themes regarding family members' view of their worker, perceptions of how families are viewed by their worker, and views of the system.

Family members' views of their worker highlighted areas of good practice and approaches that supported engagement with services. These included open and transparent communication about the role of the professional and highlighted initial meetings as critical in setting the tone

for future engagement. Parents also valued professionals who could provide practical support and took a role in advocating for parents where they were in the right or had been excluded from services. Parents reported frustration where professionals' behaviour was misaligned with expectations on themselves and a feeling that behaviours that would lead to sanction for parents, like poor punctuality, were acceptable for professionals. Studies that included grandparents highlighted that they felt they were not supported to become involved and did not receive helpful information on the child protection process.

Both parents and children perceived that social care workers brought a series of pre-conceptions about their lives that did not reflect reality and presented a barrier to productive engagement. There was a feeling that social care professionals had little hope for families where mental health problems or addictions were present and that a strong focus on risk prevented consideration of opportunities for change. Parents also reported that perceptions and expected roles were heavily gendered with mothers seen as responsible for protecting children and feeling more harshly judged and punished than men who perpetrated violence on their families. Fathers also reported feeling marginalised and struggling to gain recognition as a parent. Children felt that there were assumptions about risk reducing as they grew older but that this conflicted with a sense of escalating crisis. Further, children felt that their own agency was not recognised, and they were treated as embedded within a family rather than as individuals.

Families reported that even where interactions with individual workers were positive, there was an overriding sense of negativity towards the system. This was driven by perceptions that services are stigmatising and underpinned by legal power which has to be obeyed. There was also a feeling that services worked on a model of sudden periods of action and then long periods of delay. Although the legislative power of services was also seen as enabling as it could sometimes lead to support for families in crisis that would not otherwise be provided.

Approaches such as IFPP may help to support more positive elements of interactions with children's services and address negative aspects of the system. However, IFPP are also characterised by short periods of action and then withdrawal of support that was reported as a frustration and remain reliant on the skills and approach of teams and individual professionals.

## 8.2 Evidence from other sources

HTW also identified additional information on the impact of IFSTs in Wales from an annual report for Cardiff and the Vale of Glamorgan IFST. This report included a testimony from a parent who had received IFPP several years earlier. In this testimony, the parent outlines the long-term positive impact that IFPP had had on their life and on the lives of their children, shifting from a situation where there was an imminent risk of two children going into care due to severe issues with drug use, neglect, and abuse to a healthy and settled environment with support from the extended family (Cardiff and the Vale of Glamorgan IFST 2019).

## 9. Conclusion

Evidence on the effectiveness of IFPP is available from a number of studies summarised within a systematic review and meta-analysis and several additional studies conducted in the UK setting. HTW was also able to develop additional evidence on the cost-effectiveness of IFPP through the development of an economic evaluation.

The main source of evidence within this review was a systematic review and meta-analysis reporting on rates of out-of-home placement and this was supported by a series of studies which were conducted in the UK and included due to their higher likelihood of generalisability. Findings from these studies suggest that IFPP are associated with reductions in out-of-home placement and can keep children within the family unit. Where available, outcomes relating to child well-being and family functioning did not appear to improve on receiving IFPP, but results trended towards benefits and there was no suggestion that staying within the family unit was detrimental to children. Outcomes relating to parents were mixed across studies, but some suggested that IFPP are associated with reduction in distress and substance misuse.

Parents and children's perspectives support the idea that IFPP are beneficial and can help address crises that may risk a child's entry to care. In published literature relating specifically to IFPP, parents report that the additional support provided by IFPP helped address issues that were driving crises and they valued the additional support, and this was supported by the testimony of a parent who had had contact with IFSS in Wales. However, parents do raise concerns about the coercive nature of IFPP and question why more intensive services could not be provided prior to crises occurring.

However, there are a number of issues regarding available evidence that add uncertainty and should be considered within decision-making. First, evidence predominantly comes from non-randomised trials and recent RCTs are not available. The studies have varying methods of generating control groups and are likely to introduce biases that reduce their accuracy and precision. Second, there is a high level of variation between details relating to populations, the delivery of IFPP and support provided within usual care, and often incomplete reporting of these details within included studies. Third, much of the evidence is conducted outside of the Welsh setting and from a number of years ago and it is unclear how generalisable this evidence is to the present setting.

A de-novo cost-consequence analysis was undertaken to estimate the associated costs and outcome associated with IFPP compared to no use of the intervention, in families who are at imminent risk of children being taken into out-of-home care. The analysis found that due to a reduction in out-of-home placements in families receiving IFPP (118 fewer compared to those not receiving the intervention), the programme was associated with cost savings of £12,171 per child, in addition to being associated with a reduction in substance misuse in families, and better outcomes for parents. No measure of child welfare was included in the analysis due to a lack of identified evidence.

## 10. Contributors

This topic was proposed by Children's Social Care Research and Development Centre, Cardiff University.

The HTW staff and contract researchers involved in writing this report were:

- E Hasler, Information Specialist – Literature search & information management
- G Hopkin, Senior Health Services Researcher – Effectiveness author
- C Bowles, Health Services Researcher – Effectiveness author
- R Boyce, Health Economist – Cost effectiveness author
- A Evans, Patient and Public Involvement (PPI) Manager – PPI author
- K McDermott, Project Manager – Project management
- L Elston, Senior Health Services Researcher – Effectiveness quality assurance
- N Bromham, Senior Health Services Researcher – Effectiveness quality assurance
- S Hughes, Senior Health Economist – Cost effectiveness quality assurance

The HTW Assessment Group advised on methodology throughout the scoping and development of the report.

A range of experts from the UK provided material and commented on a draft of this report. Their views were documented and have been actioned accordingly. All contributions from reviewers were considered by HTW's Assessment Group. However, reviewers had no role in authorship or editorial control, and the views expressed are those of Health Technology Wales.

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## 12. Evidence review methods

We searched for evidence that could be used to answer the review question: what is the effectiveness and cost-effectiveness of intensive family preservation programmes for families in crisis where there is an imminent risk of children entering care?

The criteria used to select evidence for the appraisal are outlined in Appendix 1. These criteria were developed following comments from the Health Technology Wales (HTW) Assessment Group and UK experts. HTW consulted with social care experts to ensure the scope of the EAR was appropriate. Appendices 3 to 5 provides a flow diagram summarising the selection of articles for inclusion in the review.

The systematic search followed HTW's standard rapid review methodology for social care topics. The search was developed in consultation with colleagues in the HTW team and was peer reviewed by social care expert who is a member of the HTW Assessment Group. Due to scoping work that identified a high-priority recent systematic review and meta-analysis including the key outcome of out-of-home placement and the potential for a large number of search results, the full search was limited to studies published from 2010. An additional search targeted more specifically at IFPP and with no date limit was also completed to ensure relevant studies from before 2010 were also identified.

A search was undertaken of the standard databases Medline, Embase, PsycINFO, CINAHL, Cochrane Library, the International Network of Agencies for Health Technology Assessment (INAHTA) HTA database, Scopus, KSR Evidence and Epistemonikos. Additionally, the following social care databases were searched – Social Care Online, ASSIA, Social Policy & Practice, Social Services Abstracts, Sociological Abstracts, Sociology Database and HMIC. In addition, searches were conducted of key websites (including social care websites e.g., BASW, SCIE, Campbell Collaboration, IRISS and What Works for Children's Social Care) and for ongoing literature through clinical trials registries and the PROSPERO database for ongoing systematic reviews. Also, a number of highly relevant journals were "hand-searched" from their journal homepages e.g., Journal of Family Strengths (previously called Family Preservation Journal). Additional searches were undertaken for PPI evidence and health economics evidence.

The searches were conducted between 21 September and 19 October 2022, and were then updated on 23 and 24 January 2023.

Due to delays in the publication of guidance for this topic, an additional update search was undertaken in January 2024. This was carried out to identify any articles published since the first update search undertaken in January 2023. Searches were re-run with the same criteria as the previous searches. All records were downloaded into EndNote and de-duplicated against the original and first update search results for each database. Forward citation searching for the included studies in this evidence appraisal report was conducted in the Scopus database, and the records for these were downloaded and de-duplicated against all previously identified papers. Additional searching was undertaken to check for any updated publications to the ongoing study identified in the evidence appraisal report, and an update search of PROSPERO for any new ongoing reviews. TripPro and some key websites were also searched for new hits.

Appendix 2 gives details of the search strategy used for Medline. Search strategies for other databases are available on request.

The search identified 721 references after duplicates were removed. The PRISMA diagram in Appendix 3 has been updated to reflect this. No additional studies were identified that matched the protocol for this topic (i.e., relevant population, study design, intervention, and relevant outcomes).

## Appendix 1. Inclusion and exclusion criteria for evidence included in the review

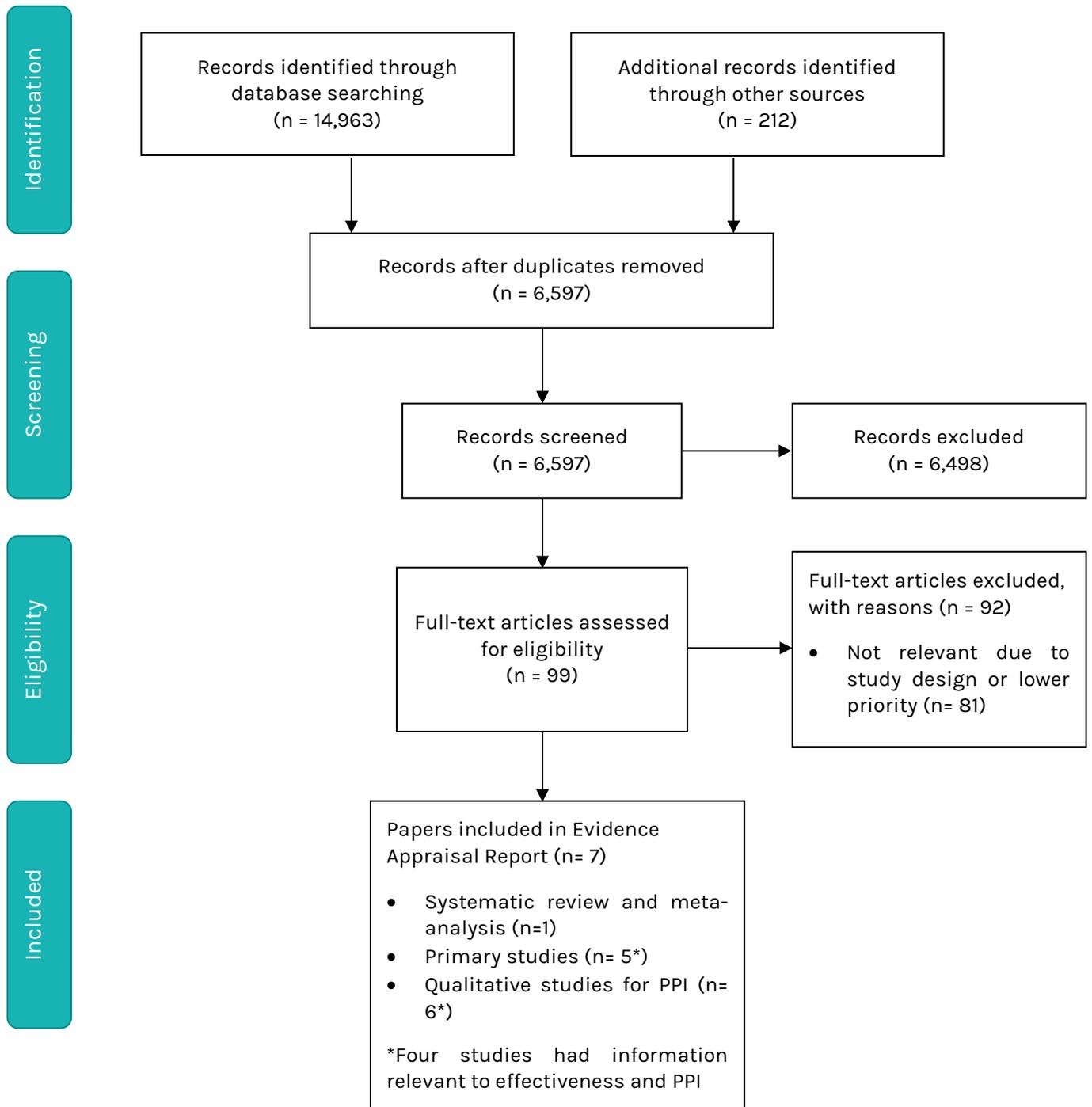
|                         | Inclusion criteria   | Exclusion criteria  |
|-------------------------|--|---|
| Population              | Families in crisis where there is an imminent risk of a child needing an out-of-home placement   | Families where a child protection plan and registration on child protection register is in place but there is not an imminent risk of out-of-home placement |
| Intervention            | Intensive family preservation interventions  | -   |
| Comparison/ Comparators | Standard care<br>This is likely to vary across settings and the generalisability of evidence will be considered through the appraisal process  | -   |
| Outcome measures        | Effectiveness outcomes (e.g., reduction in out-of-home placement, changes to risk of harm, improvement in family function, reduction in substance misuse)<br>Quality of life and wellbeing outcomes (e.g., Warwick-Edinburgh Mental Wellbeing Scale)<br>Economic outcomes (e.g., intervention cost, cost of provision of out-of-home placements, other health and social care service utilisation) |   |
| Study design            | Prioritise higher quality study types and studies that are more generalisable to Wales and will only include evidence from “lower priority” sources where this is not reported by a “higher priority” source.  |   |
| Search limits           | No date limits apply; English language only  |   |
| Other factors           | Outcomes considered for children, parents, and other members of the family unit due to the aim of IFPP to improve outcomes for each of these groups  |   |

## Appendix 2. Medline search strategy

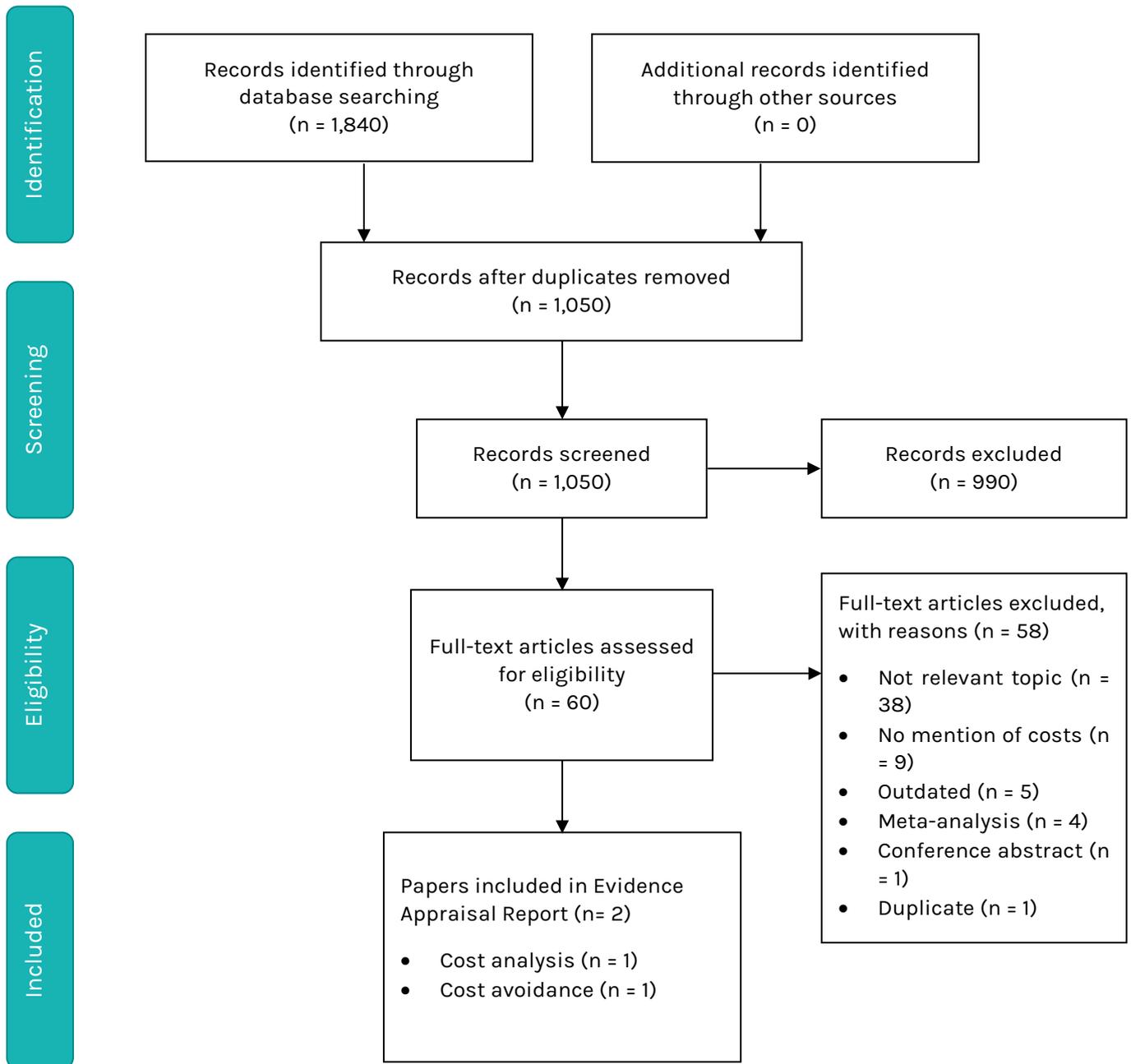
| Ovid MEDLINE(R) ALL 1946 to January 10, 2024                                       |  |        |
|--|--|--------|
| <b>intensive family interventions</b>  |  |        |
| 1  | Crisis Intervention/ and (*Family/ or *Family Characteristics/ or *Family Health/ or Family Therapy/)  | 445    |
| 2  | *Family Therapy/ and (*Parents/ or *Caregivers/ or *Legal Guardians/ or *Foster Home Care/ or *Grandparents/)  | 442    |
| 3  | (family preservation or familial preservation or preserv* famil*).tw,kf.   | 179    |
| 4  | intensiv* famil*.tw,kf.  | 129    |
| 5  | ((intensiv* or multimodal or multi-modal or multisystemic or multi-systemic or multidimension* or multi-dimension*) adj3 famil* therap*).tw,kf.  | 101    |
| 6  | ((intensiv* or multimodal or multi-modal or multisystemic or multi-systemic or multidimension* or multi-dimension*) adj3 (homebased* or home-based* or inhome* or in-home* or famil*) adj3 (intervention* or team or service* or project* or program*)).tw,kf.   | 241    |
| 7  | famil* peer support*.tw,kf.  | 38     |
| 8  | family focus*.kw.  | 96     |
| 9  | (famil* adj5 (reunit* or reunif*)).tw,kf.  | 399    |
| 10   | (famil* adj3 recover*).tw,kf. or (families and recovery).kw.   | 767    |
| 11   | ((family support* or support* famil*) adj3 (intensiv* or intervention* or service* or program*)).tw,kf.  | 1078   |
| 12   | (family intervention adj5 (intensiv* or team or service* or project* or program* or therap*)).tw,kf.   | 210    |
| 13   | (famil* adj3 crisis adj3 (intensiv* or intervention* or team or service* or project* or program* or therap*)).tw,kf.   | 95     |
| 14   | (crisis intervention adj5 (intensiv* or team or service* or project* or program* or therap*)).tw,kf.   | 511    |
| 15   | (famil* adj5 (home-based or in-home)).tw,kf.   | 768    |
| 16   | ((home visiting or home visitation) adj3 (intensiv* or intervention* or service* or program*)).tw,kf.  | 1413   |
| 17   | (home-based service* or in-home service* or in-home session*).tw,kf.   | 438    |
| 18   | (prevent* adj2 placement*).tw,kf. or placement changes.kw.   | 440    |
| 19   | (Homebuilders or Famil* First).ti.   | 67     |
| 20   | ((Homebuilder* or Famil* First) adj3 (intensiv* or intervention* or service* or program* or prevention*)).tw,kf.   | 30     |
| 21   | or/1-20  | 7414   |
| <b>at risk populations e.g abuse, violence, conflict, alcohol/substance misuse</b> |  |        |
| 22   | Child Abuse/   | 26107  |
| 23   | Child Abuse, sexual/   | 11159  |
| 24   | exp Child Welfare/   | 32257  |
| 25   | Infant Welfare/  | 2785   |
| 26   | Adverse Childhood Experiences/   | 3639   |
| 27   | ((child* or boy or girl or infant* or toddler* or youth* or young* or young person* or young people* or adolescen* or teenag* or baby or babies) adj3 (abus* or violen* or conflict* or maltreat* or mistreat* or molest* or negligen* or cruel* or harm* or vulnerab* or victim* or risk* or "at risk" or "in need" or protection or welfare)).tw,kf. | 150487 |
| 28   | ((child* or boy or girl or infant* or toddler* or youth* or young* or young person* or young people* or adolescen* or teenag* or baby or babies) adj5 neglect*).tw,kf.   | 7312   |
| 29   | Domestic Violence/   | 7784   |
| 30   | Spouse Abuse/  | 7589   |
| 31   | Intimate Partner Violence/   | 6325   |
| 32   | ((domestic* or spous* or partner or marital) adj2 (abus* or violen* or conflict* or neglect* or maltreat* or mistreat* or molest* or negligen* or cruel* or harm*)).tw,kf.   | 22363  |
| 33   | Coercion/  | 5141   |

|                         |   |        |
|-------------------------|---|--------|
| 34                      | ((coercive adj3 (control* or interact*)) or coercion).tw,kf.  | 4852   |
| 35                      | Psychosocial Deprivation/   | 2054   |
| 36                      | Violence/   | 35550  |
| 37                      | Exposure to Violence/   | 1160   |
| 38                      | Family Conflict/  | 2525   |
| 39                      | ((famil* or intrafamil* or interfamil* or intraparent* or interparent* or parent* or household* or communit*) adj3 (abus* or violen* or conflict* or neglect* or maltreat* or mistreat* or molest* or negligen* or cruel* or harm* or dysfunction* or disad vantag*).tw,kf. | 27998  |
| 40                      | ((famil* or intrafamil* or interfamil* or intraparent* or interparent* or parent* or household* or communit*) adj1 (vulnerab* or victim* or risk* or "at risk" or "in need" or protection or welfare)).tw,kf.   | 13619  |
| 41                      | Vulnerable Populations/   | 12927  |
| 42                      | ((multi-problem* or multiproblem* or multipl* problem*) adj3 (famil* or household*).tw,kf.  | 125    |
| 43                      | (multiple* adj3 (vulnerab* or system*).tw,kf.   | 36669  |
| 44                      | "Child of Impaired Parents"/  | 5662   |
| 45                      | (parent* adj3 (mental health* or mental* ill*).tw,kf.   | 3741   |
| 46                      | exp Alcohol-Related Disorders/  | 122426 |
| 47                      | Alcoholics/   | 874    |
| 48                      | Alcohol Drinking/   | 76154  |
| 49                      | (alcohol* adj3 (abus* or misuse* or use* or addict* or dependen*).tw,kf.  | 102469 |
| 50                      | exp Substance-Related Disorders/  | 314193 |
| 51                      | Drug Users/   | 4179   |
| 52                      | ((substance or drug or medication) adj3 (abus* or misuse* or use* or addict* or dependen*).tw,kf.   | 278759 |
| 53                      | ((opioid or opiate) adj3 (abus* or misuse* or use* or addict* or dependen*).tw,kf.  | 35909  |
| 54                      | exp Social Work/  | 18772  |
| 55                      | Social Workers/   | 1144   |
| 56                      | Child Protective Services/  | 825    |
| 57                      | Social Welfare/   | 9778   |
| 58                      | ((social or protective) adj (work* or case work* or casework* or service* or welfare)).tw,kf.   | 37612  |
| 59                      | child* protect*.tw,kf.  | 4529   |
| 60                      | (CAMHS or CYPMHS).tw,kf.  | 682    |
| 61                      | ((child* or youth* or young* or young person* or young people* or adolescen* or teenag*) adj2 mental health servic*).tw,kf.   | 2587   |
| 62                      | (safeguard* or safe-guard*).tw,kf.  | 16504  |
| 63                      | or/22-62  | 944150 |
| <b>set combinations</b> |   |        |
| 64                      | 21 and 63   | 2195   |
| 65                      | (child* protect* adj3 model*).tw,kf.  | 27     |
| 66                      | 64 or 65  | 2221   |
| 67                      | limit 66 to (english language and yr="2010 -Current")   | 1298   |
| 68                      | (intensiv* adj3 famil* adj3 preserv*).tw,kf.  | 18     |
| 69                      | 67 or 68  | 1307   |

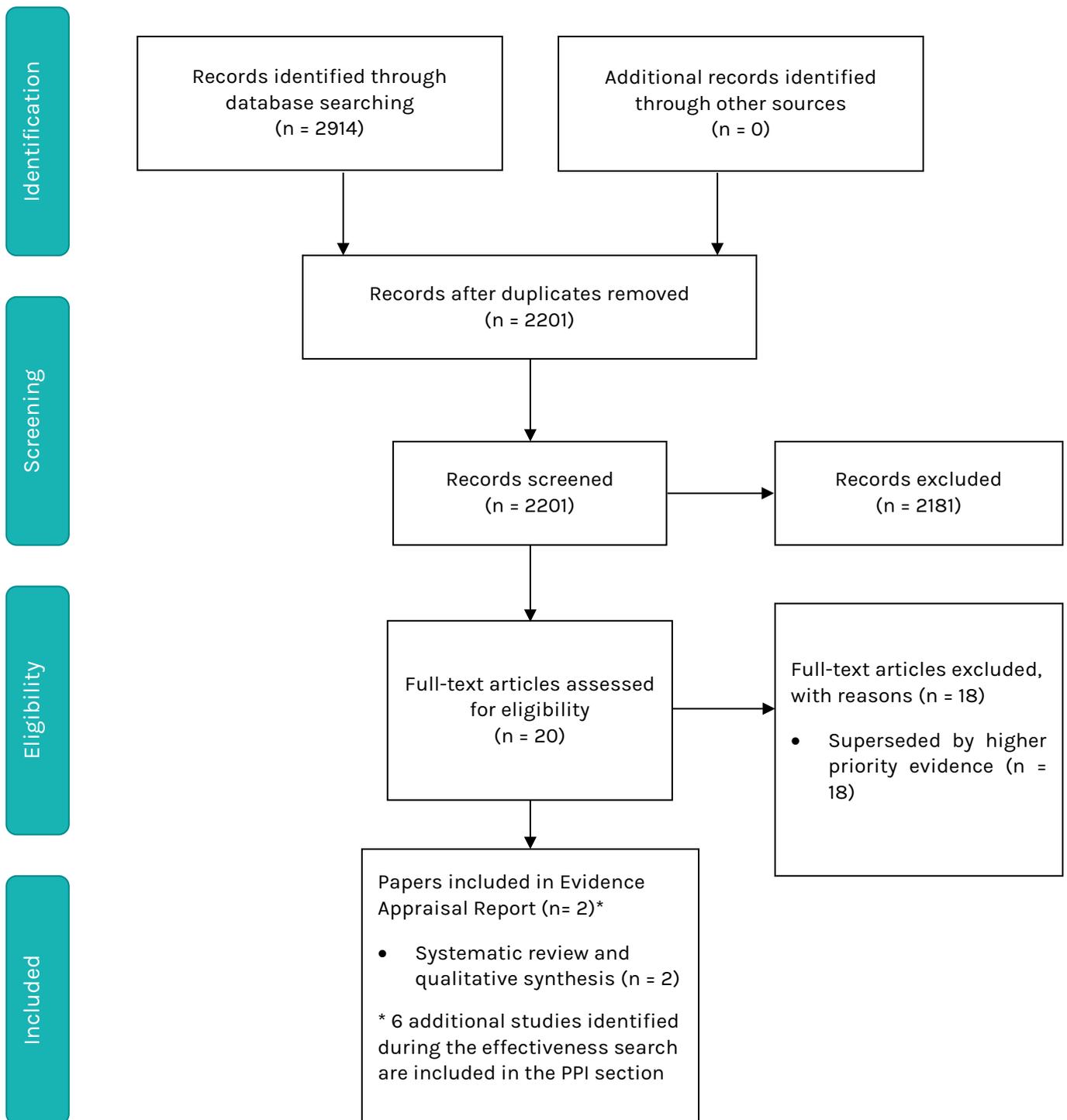
### Appendix 3. Flow diagram outlining selection from the effectiveness search



## Appendix 4. Flow diagram outlining selection from the economic search



## Appendix 5. Flow diagram outlining selection from the patient and public involvement search



## Appendix 6. HTW economic analysis

### 1. Background and objective

An economic analysis was developed to estimate the costs and outcomes of intensive family preservation programmes (IFPP) when used to assist families who are at imminent risk of children being removed from the home. The economic model compares IFPP to families receiving no such intervention.

The model structure is a simplification of true events and follows a general pathway of children entering care in the UK. Due to a lack of evidence, the model only runs over a time horizon of two years.

### 2. Methods

#### 2.1 Model approach

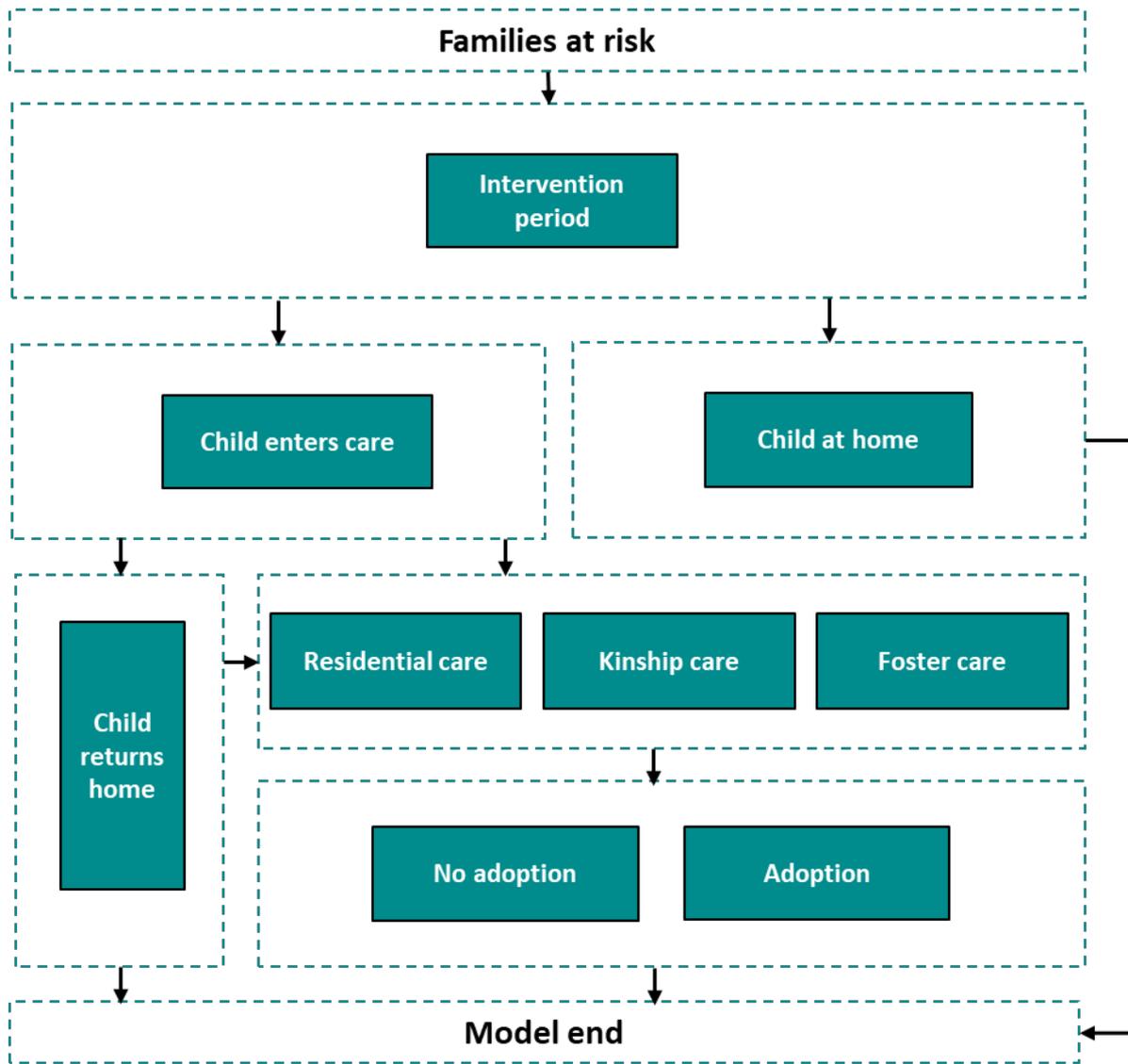
A Markov model was developed using Microsoft Excel to comprise predictions of out-of-home care for a cohort of children eligible for IFPP. IFPP are intensive in-home intervention services designed to aid families at imminent risk of children being removed from the home. A caseworker is assigned to the family and is available 24 hours a day, seven days a week, for a period of four to six weeks. Each caseworker has a small caseload of two to three families to enable them to provide an intensive service. Caseworkers are able to help in terms of skill development, therapy, and material help. Within the model, children receiving this intervention will be compared to those not receiving this specific intervention.

An overview of the model structure is provided in Figure 1. The model operates an initial 4.5-month cycle and, following this, captures outcomes at 1 year and 2 years. Despite the structure reflecting a decision tree, a Markov model was selected for analysis to enable simple calculation of discounting in year two. At model initiation, families in the intervention arm are assumed to receive the 4–6-week IFPP. Families who do not receive the intervention are modelled similarly, but without costs and resource use associated with IFPP. Following this, children are either placed in out-of-home care or remain at home. If children are not removed from their home environment, they are assumed to remain at home for the remainder of the modelled time horizon. This is consistent with the data from Bezczky et al. (2020) informing the model, which looks at out-of-home placements at any time point.

For children who are placed in out-of-home care initially, they will either be placed in foster care, residential care, kinship care, or be returned back to their family. If children are returned back home, they are subject to a risk of being re-entered to care, else they will remain at home for the remainder of the modelled time horizon. This is described in more detail in section 2.2.5. For children who are placed into care, a proportion will be adopted at the end of the second year, whereas the rest are assumed to remain in the care system. Adoption is assumed to occur at the two-year time point only due to the average time from being placed into care to adoption in England being two years and three months (similar data was not identified for Wales) (UK Government 2022).

Limited evidence was identified looking beyond a two-year time horizon, with Bezczky et al. (2020) finding no statistically significant benefit for risk of out-of-home placement at greater than 2 years following IFPP. As such, we are unable to extrapolate outcomes to a longer time horizon.

Background mortality is accounted for in the model using Welsh life tables (Office for National Statistics 2020).



**Figure 1. Model schematic**

## 2.2 Model inputs

Assessing the efficacy of IFPP is challenging as there is no generic measure in social care with which to measure effectiveness. As the most widely reported outcome, out-of-home placement was used as the efficacy measure of this analysis, using data from a meta-analysis by Bezczky et al. (2020).

### 2.2.1 Baseline characteristics

Baseline characteristics of the modelled cohort was derived from Bezczky et al. (2020). The meta-analysis combined outcomes from multiple studies to report on effectiveness of IFPP in terms of out-of-home placements, compared to receiving no such intervention, at differing timepoints. For the purpose of this economic model, the “at any time point” data were used. Therefore, to derive baseline characteristics, studies included in the “at any time” outcome were pooled and weighted according to the number of children reported in each study. Table A1 provides details of the included studies and the weighted average used in the analysis for each input.

**Table A1. Baseline characteristics in the economic model**

| Study                          | Number of children | Substance misuse issues | Children per family | Mean age    | Percentage Male |
|--------------------------------|--------------------|-------------------------|---------------------|-------------|-----------------|
| Biehal (2005)                  | 209                | 13%                     | 1.03                | 13.5        | 55%             |
| Ciliberti (1998)               | 92                 | 65%                     | 1.03                | 3.0         | -               |
| Forrester et al. (2008)        | 368                | 100%                    | 3.16                | 7.0         | -               |
| Forrester et al. (2016)        | 84                 | 94%                     | 3.11                | 9.0         | 59%             |
| Kirk & Griffith (2004)         | 26,264             | -                       | -                   | 6.1         | 50%             |
| Raschick (1997)                | 104                | -                       | 2.04                | 9.3         | -               |
| Wood et al. (1988)             | 108                | -                       | 2.16                | 7.3         | 57%             |
| Dennis-Small & Washburn (1986) | 518                | -                       | 3.01                | -           | -               |
| Halper & Jones (1981)          | 286                | -                       | 2.38                | -           | 47%             |
| Jones et al. (1976)            | 992                | -                       | 1.81                | 6.5         | 57%             |
| Jones (1985)                   | 243                | 10%                     | 1.71                | -           | 60%             |
| Pecora et al. (1991)           | 609                | -                       | 1.29                | 12.5        | -               |
| Schwartz et al. (1991)         | 116                | -                       | -                   | -           | 54%             |
| Walters (2006)                 | 202                | -                       | -                   | 7.5         | 52%             |
| Yuan et al. (1990)             | 730                | -                       | 2.40                | 6.7         | -               |
| <b>Average:</b>                |                    | <b>41.59%</b>           | <b>2.11</b>         | <b>6.32</b> | <b>50.08%</b>   |

## 2.2.2 Out-of-home placements

As the most widely reported outcome, out-of-home placement is the main efficacy measure of this analysis. However, it should be noted that there are no available data on welfare of children following out-of-home placements. As described above, the analysis uses the “at any time point” out-of-home placement data due to the greater number of studies included in the meta-analysis.

Baseline risk of out-of-home placement and the reduction in risk for those families receiving IFPP is sourced from the meta-analysis by Bezeczký et al. (2020). The proportion of children going into care without receiving IFPP is 27.99%, and the reduction in risk for those receiving IFPP is defined by a relative risk (RR) of 0.513. Due to a stabilisation of the RR between three months and six months (0.567 to 0.512), out-of-home placements are assumed to occur at 4.5 months in the model.

## 2.2.3 Secondary outcomes

The economic model also considers a reduction in parental substance misuse and parental psychological distress. Both secondary outcomes were found to be significantly improved by IFPP in the study by Forrester et al. (2016), which looked at Option 2 (IFPP specifically for families suffering with substance misuse) in Wales. Table A2 provides baseline reduction in both outcomes without IFPP, and the associated odds ratio (OR) for those families that received the intervention. Parent’s psychological distress was measured by GHQ-12 scores, whereby a score of 11+ indicates distress. A reduction in psychological distress refers to a reduction in those who are exhibiting distress based on their GHQ-12 scores.

**Table A2. Secondary outcomes included in the model**

|   | Baseline probability | IFPP OR |
|---|----------------------|---------|
| Reduction in parental substance misuse              | 58%                  | 12.14   |
| Parent's psychological distress (GHQ-12 score > 10) | 85%                  | 0.15    |

### 2.2.4 Mortality

Mortality for the general population is derived using published life tables for Wales (Office for National Statistics 2020) and is weighted annually according to the baseline gender distribution in the analysis.

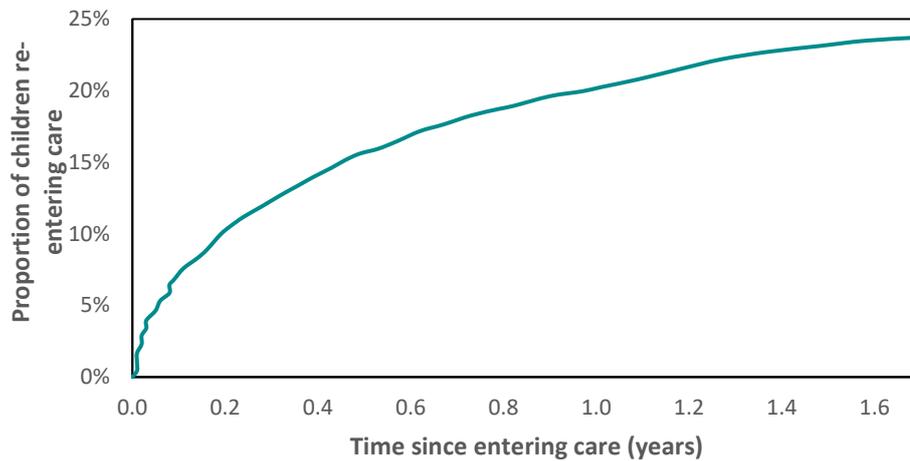
### 2.2.5 Child placements

Once children are removed from the home, they are placed in out-of-home care. This comprises foster care, residential care, or kinship care within the model. The distribution of children across the differing care options has been derived using Welsh data from CoramBAAF (2021) as shown in Table A3. These data cover all looked after children in Wales. This is a limitation of the model, as data on placement type were not available for children starting to be looked after. As it could take time to arrange foster care, it might be expected that the proportion in residential care could be higher in the newly looked after population.

A proportion of children are only removed from the home for a short period of time and are subsequently reunited with their families. For the purposes of the model, it is assumed that these children will spend 4.5 months in residential care before being reunited with their families. However, this cohort of children is subject to a risk of returning to care, derived from 2018-2019 data from a study by Goldacre et al. (2022) (Figure 2). The study looked at reunification and re-entry to care and presents time to event data for children who re-enter care.

**Table A3. Children outcomes following out-of-home placement from CoramBAAF (2021)**

|  | Proportion |
|--|------------|
| Children going to foster care            | 49.9%      |
| Children going to residential care       | 9.6%       |
| Children going to kinship care           | 23.2%      |
| Children placed back with parents        | 17.3%      |
| Children that will eventually be adopted | 10.7%      |



**Figure 2. Proportion of children re-entering care after being returned home**

## 2.3 Costs

All costs within the model have been sourced from Jones & Burns (2021). Costs for IFPP are based on social worker costs only, under the assumption that families receiving the intervention will receive 9 hours of caseworker time per week for 6 weeks, based on expert advice. Children not receiving the intervention, and those who remain at home following the intervention period, are likely to still be under a child protection plan and so will still require ongoing support. Experts estimated that children and their families would receive 1.5 hours of caseworker time per week in this case.

Costs associated with referrals to other services and additional support are not provided in the analysis due to a lack of data on the distribution of the wide range of services offered. However, a scenario analysis will be conducted whereby additional costs of IFPP are applied, sourced from Forrester et al. (2016), to capture additional costs of the service. This is likely to include double counting of social worker costs but can be assumed to be a conservative assumption in order to represent a higher cost of the service. The additional cost of the intervention was inflated to current values.

Costs associated with residential and foster care are applied for the duration of time that children are in care. It was assumed that the kinship care data relate to those caring for a child through an arrangement with the local authority, and so the child would be classed as 'looked after'. The model therefore does not capture costs borne by informal kinship carers, kinship carers with parental responsibility (no longer looked after) or private foster carers. The costs of kinship care were assumed to be the same as the costs of foster care in the model, as kinship carers should receive payments from the local authority (Children in Wales 2014). If children are returned to their families after initially being placed in care, they are subject to the costs associated with being at home after an initial 4.5 months in residential care.

Adoption costs comprise adoption planning, preparation and assessment of adopters, panel, linking and matching, placement of the child and the assessment for adoption support. Data are provided by the Personal Social Services Research Unit (Jones & Burns 2021) for standard cases and difficult to place cases. In the base case analysis, costs associated with a standard case have been applied, however, costs associated with difficult to place cases have been explored in a scenario analysis.

Costs applied in the model refer to differing time frames, as specified in Table A4, but are adjusted within the model to reflect the cycle length and applied on a per cycle basis.

Second year costs were discounted at an annual rate of 3.5%.

**Table A4. Costs in the economic model**

| Resource item                          | Cost    | Represented time | Source                  |
|--|---------|------------------|-------------------------|
| Social worker                          | £46     | Per hour         | Jones & Burns (2021)    |
| Foster care                            | £661    | Per week         |                         |
| Residential care – local authority     | £5,059  | Per week         |                         |
| Residential care – external provisions | £4,345  | Per week         |                         |
| Adoption                               | £15,810 | One-off          |                         |
| IFPP Services                          | £2,195  | One-off          | Forrester et al. (2016) |

### 3. Results

#### 3.1 Base case results – Primary outcome

The base case results of the primary analysis are provided in Table A5. The results show that in a cohort of 1,000 children that receive IFPP, 118 fewer children are in out-of-home care by the end of the modelled time horizon compared to a cohort not receiving the intervention. Despite an increased cost associated with IFPP, savings from a reduction in care results in average cost savings of £12,171 per child. It should be noted that despite a reduction in out-of-home placements and cost savings associated with IFPP, no evidence is presented as to the impact on child welfare.

**Table A5. Base case results - primary outcomes**

|   | No intervention | IFPP    | Incremental     |
|---|-----------------|---------|-----------------|
| Out-of-home placements (per 1,000 children) | 242             | 124     | <b>-118</b>     |
| Costs per child                             | £36,296         | £24,125 | <b>-£12,171</b> |

#### 3.2 Base case results – Secondary outcomes

The base case results of the secondary analysis are provided in Table A6. The analysis assumes an average of 2.11 children per family (See Table A1), thus the modelled cohort of 1,000 children translates to 474 families. Of these families, 238 had substance misuse at baseline. For those that received IFPP, only 13 families had substance misuse following the intervention period, compared to 99 who did not receive the intervention: a difference of 86 families

Results also show that of the 474 families that receive IFPP, 187 more families see a reduction in parental psychological distress compared to those that do not receive the intervention.

**Table A6. Base case results - secondary outcomes**

|  | No intervention | IFPP | Incremental |
|--|-----------------|------|-------------|
| Reduction in parental substance misuse | 139             | 224  | <b>86</b>   |
| Parental psychological distress        | 401             | 214  | <b>-187</b> |

### 3.3 Deterministic sensitivity analysis results

A series of deterministic sensitivity analyses (DSA) were conducted, whereby an input parameter is changed, the model is re-run, and the new cost-effectiveness result is recorded. This is a useful way of estimating uncertainty and determining the key drivers of the model result. For all inputs in the model, mean values were varied by 20% above and below the mean value for the analysis, with the exception of time horizon and discounting, which were not adjusted in the analysis.

The impact of the analysis on costs and out-of-home placements are presented in Figure 3 and Figure 4, respectively. Regardless of alterations in the input parameters, IFPP remains to be a cost-saving intervention and reduce the number of children entering out-of-home care.

The most influential parameters in terms of costs were the relative risk for the reduction in out-of-home placement associated with IFPP, the baseline risk of out-of-home care, and the number of hours that a case worker spends with families under IFPP. When the relative risk of out-of-home placement are reduced, there are more costs associated with IFPP as more children are taken into care, and as such, incremental costs are reduced to £8,925 per child. Likewise, when the baseline level of out-of-home care placements is lowered, there is less benefit to IFPP as fewer children are prevented entering out-of-home care, and so incremental costs are reduced to £9,322 per child. When a case worker spends longer with a family, costs for IFPP are increased and as such, incremental costs are reduced to £9,135 per child.

### 3.4 Scenario analyses results

A number of scenarios were tested to assess the impact of some key assumptions in the model. Table A7 provides a list of scenarios that were tested and their impact on modelled results.

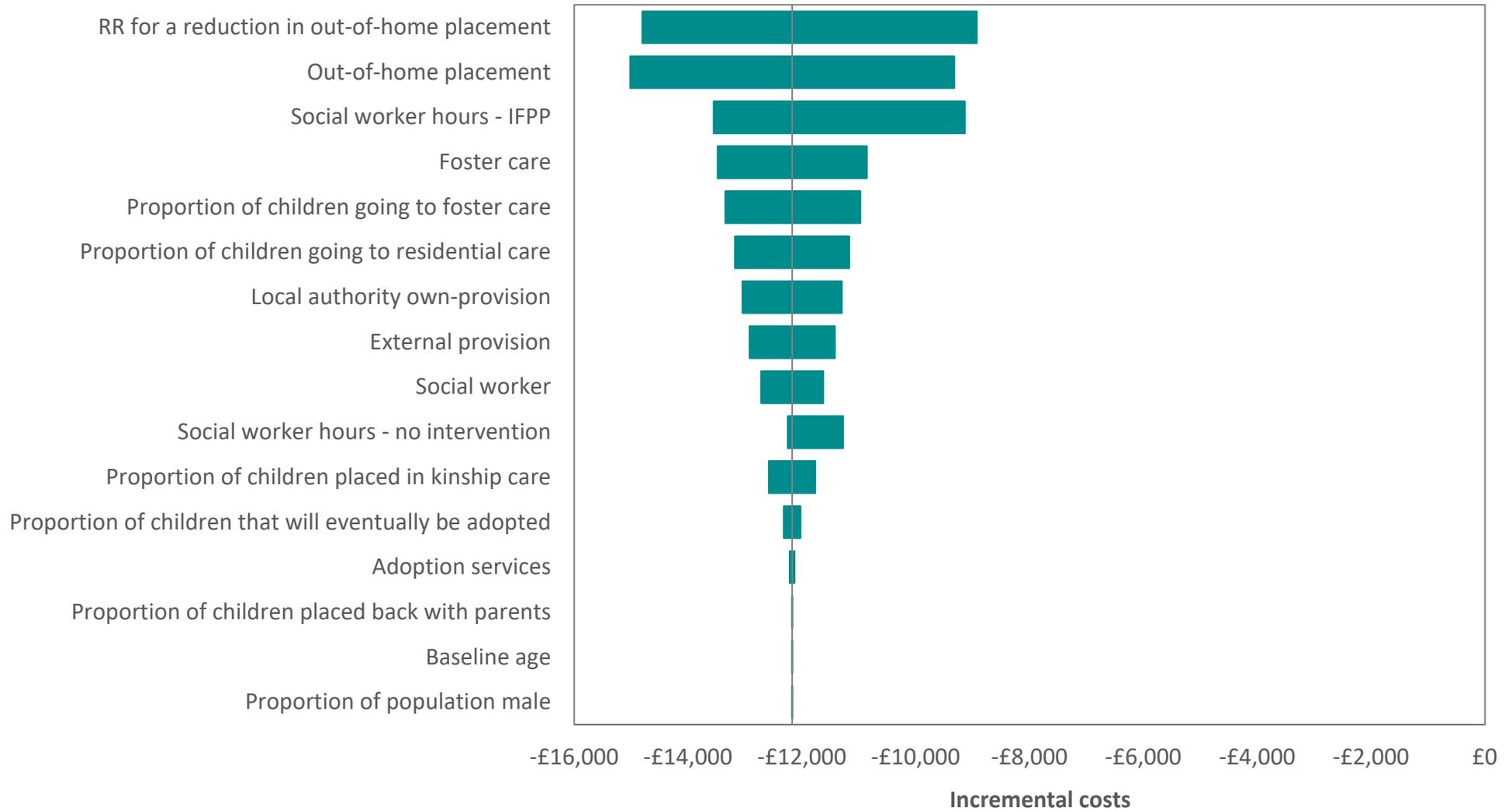
Across all tested analyses, IFPP remains a cost-saving intervention and prevents out-of-home placements.

When only Welsh data were considered, using pooled data from Forrester et al. (2008) and Forrester et al. (2016), incremental costs were slightly decreased and there was a smaller reduction in children entering care. Although there is a higher baseline risk of entering care when using Welsh data, the relative risk is much closer to 1 (0.72 compared to 0.513 in the base case analysis), and so fewer out-of-home care placements are avoided.

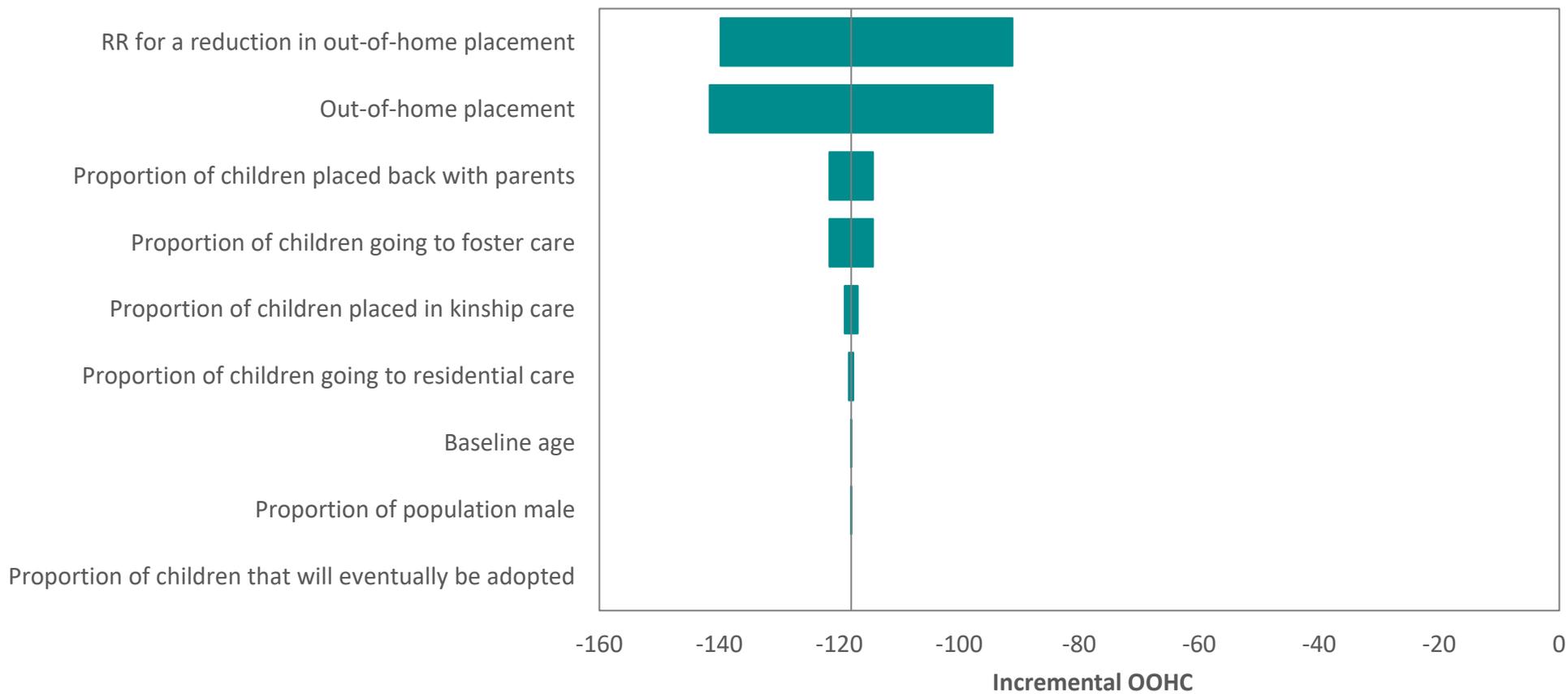
Including additional costs of IFPP increased the costs of the intervention arm, and as such reduced the incremental cost.

When “difficult to place” adoption costs are included in the analysis, costs are increased in both the IFPP and control arm. Incremental costs are therefore slightly increased to £12,241.

Removing the option for children to return home following being taken into out-of-home care results in IFPP being associated with even more avoided out-of-home care cases and an increase in incremental costs due to more costs being accrued in the control arm for care costs.



**Figure 3. Impact of the DSA on incremental costs**



**Figure 4. Impact of the DSA on incremental out-of-home care placement**

**Table A7. Results of scenario analyses**

| Scenario                                 | Description   | Input   | Result  |
|--|---|---|---|
| <b>Welsh data only</b>                   | The base case analysis derives majority of inputs from a meta-analysis from multiple country settings as Welsh data was limited. A scenario is conducted using pooled Welsh data from Forrester et al. (2008) and Forrester et al. (2016).  | Proportion male = 59%<br>Baseline age = 7.38<br>Families with substance misuse = 100%<br>Average children per family = 3.15<br>Out-of-home placement risk = 43.8%<br>RR for out-of-home placements = 0.72 | <b>Incremental costs:</b> -£10,755<br><b>Incremental OOHC:</b> -106 |
| <b>Include additional IFPP costs</b>     | The base case analysis includes only case worker costs. This scenario includes additional costs of IFPP, sourced from Forrester et al. (2008), to account for additional costs of referrals to other services. This is likely to include double counting of costs for case workers but provides a conservative estimate as no additional costs are considered in the control arm. | Additional cost of IFPP = £2194.67  | <b>Incremental costs:</b> -£9,976<br><b>Incremental OOHC:</b> -118  |
| <b>Difficult to place adoption costs</b> | Adoption costs in the base case analysis consider a standard case only. This scenario considers the costs of difficult to place cases.  | Cost of adoption: £20,835   | <b>Incremental costs:</b> -£12,241<br><b>Incremental OOHC:</b> -118 |
| <b>No return home</b>                    | The base case analysis assumes that a proportion of children enter care for a small period of time before returning home. These children are subject to a cyclic rate of re-entering care. This scenario considers the case where no children return home following care entry.   | Proportion entering foster care = 60.3%<br>Proportion entering residential care = 11.6%<br>Proportion entering kinship care = 28.0%<br>Proportion returning to parents = 0.0%                             | <b>Incremental costs:</b> -£12,164<br><b>Incremental OOHC:</b> -136 |

Abbreviations - IFPP: intensive family preservation programmes; OOHC: out-of-home care; RR: relative risk

### 3.5 Probabilistic sensitivity analysis results

Probabilistic sensitivity analysis (PSA) was conducted to assess the combined parameter uncertainty in the model. In this analysis, the mean values that were utilised in the base case were replaced with values drawn from distributions around the mean values.

The average results of the analysis are presented in Figure 5. All simulations of the PSA resulted in IFPP being a cheaper option compared to not using the intervention and reduced the number of children entering out-of-home care.

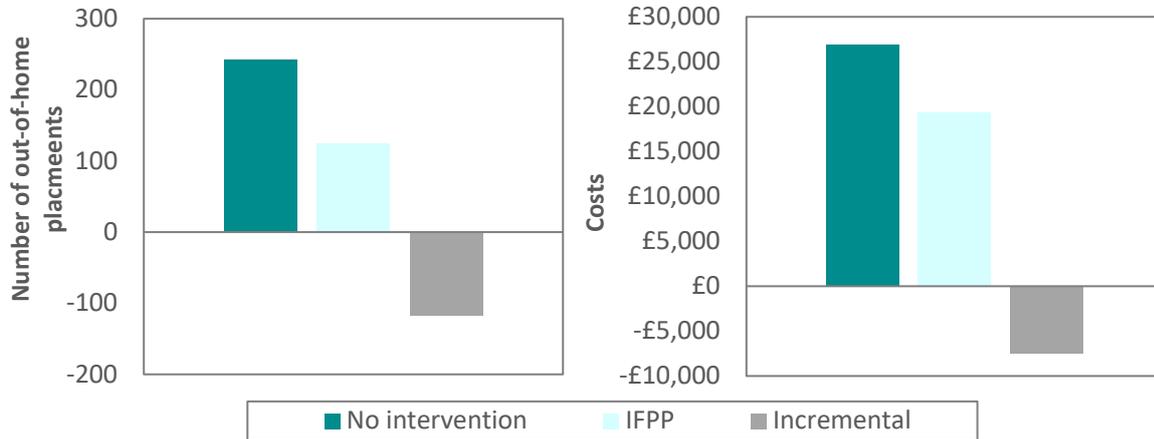


Figure 5. Results of the probabilistic sensitivity analysis