

FOR OUR CHILDREN & FAMILIES

# Restoring Parent-Child Relationships After Disparagement, Alienating Behaviors, or Contact Refusal

Full safety-first research report on differential assessment, staged restoration, treatment components, contraindications, and court-informed clinical boundaries.

<b>Public research edition</b>	May 2026
<b>Use</b>	Public education, source review, civic discussion, and safer drafting.
<b>Boundary</b>	Not legal advice, medical advice, diagnosis, intake, or emergency response.

Rebranded FOCaF edition based on uploaded research source material. The report does not presume alienation; it preserves the distinction between alienating behaviors, justified estrangement, abuse, coercive control, fear, and other safety threats.

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# How to use this research paper

This paper is included to support careful public review, better questions, safer drafting, and stronger source discipline. It should not be used as a shortcut to label a private family situation or to override individualized safety assessment.

- Keep safety, abuse, coercive control, fear, trauma, and child protection boundaries ahead of any general theory.
- Use the sources to understand patterns and public-policy risks; do not use them to diagnose a child, parent, or case.
- Where the paper discusses law or court process, treat it as public-education research and not legal advice.
- Where the paper discusses clinical intervention, qualified professional judgment and individualized safety screening remain essential.
- Do not send private case facts, child names, allegations, medical records, sealed records, or confidential materials to FOCaF.

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# Restoring Parent-Child Relationships After Disparagement, Alienating Behaviors, or Contact Refusal

## Executive summary

Parental alienation or parental disparagement is best treated clinically as a pattern of parental alienating behaviors directed at a child that undermines the child's relationship with the other parent and may culminate in contact resistance or refusal. The first task is not to presume alienation; it is to distinguish alienation from justified estrangement driven by abuse, coercive control, frightening parenting, or other legitimate safety threats. In the published and official sources reviewed here, restoration work is appropriate only after a structured safety screen and a clear role separation between forensic/legal functions and treatment functions. [1]

The direct alienation-specific intervention literature is still weak. The prioritized NLM literature contains narrative and case-based treatment models for reunification therapy, but not a mature body of randomized alienation-specific trials with low risk of bias. The strongest evidence for helping families restore relationships therefore comes from component interventions that target the mechanisms most relevant to these cases: evidence-based parenting programs, dyadic attachment interventions for young children, trauma treatments for symptomatic children, and family attachment work for adolescents, all embedded inside a court-informed, trauma-informed, measurement-based plan. [2]

Among the better-supported components, the World Health Organization[3] parenting guideline reports moderate-certainty evidence that parenting interventions reduce harsh parenting and child externalizing problems and improve positive parenting. The New Beginnings Program, tested in a large randomized effectiveness trial in divorcing/separating families, used 10 sessions and showed short-term improvements in parenting and some child mental health outcomes, while a 15-year follow-up of earlier randomized trials found lower incidence of internalizing disorders in young adulthood. These findings do not prove "reunification therapy" per se, but they do show that structured parenting and post-separation intervention can change long-run child outcomes in populations adjacent to alienation cases. [4]

For child symptom treatment, TF-CBT has randomized evidence for children and adolescents with trauma symptoms, PCIT has meta-analytic support for reducing externalizing behavior and parenting stress in high-risk and maltreated families, and dyadic interventions such as ABC and CPP show benefits for attachment security, regulation, and caregiver-child functioning in young children. For adolescents with serious attachment rupture and suicidality, ABFT has randomized evidence, although later trials suggest the model is helpful but not clearly superior to another active, family-enhanced treatment. The correct clinical conclusion is that restoration work should usually combine relationship repair with evidence-based symptom treatment, rather than treating contact refusal as a purely legal-compliance problem. [5]

The most defensible practical pathway is staged: stop ongoing disparagement and sabotage, reduce the child's exposure to interparental conflict, stabilize the child clinically, rebuild safe and predictable contact in small steps, and only then move into deeper family repair and relapse prevention. Contact quality matters as much as contact quantity; in one high-conflict divorce study, fathers' parenting quality mediated the association between parenting time and child internalizing problems, and other work shows that high conflict still harms youth even when parent-child relationships are otherwise important and valued. More time with a parent is therefore not an adequate restoration strategy unless the interactions are emotionally safe and developmentally attuned. [6]

Contraindications matter. Attempts at reunification may be harmful when abuse, coercive control, stalking, or post-separation domestic violence are unresolved; when a child becomes acutely unstable with contact expansion; or when programs rely on coercion, isolation, or force. Official guidance from American Academy

of Child and Adolescent Psychiatry[7] and the Association of Family and Conciliation Courts[8] strongly supports comprehensive evaluation, individualized planning, clear professional roles, and avoidance of coercive practices. [9]

## Scope and clinical framing

This report defines the exposure as parental alienation/parental disparagement from birth through adolescence, operationalized as repeated parental alienating behaviors that recruit the child into denigrating, fearing, avoiding, or rejecting the other parent, or that obstruct the child’s relationship through contact sabotage, guilt induction, loyalty demands, or distorted reality-testing about the other parent. The best-supported target populations in the literature are children and adolescents in separated or divorced, high-conflict, and often court-involved families, especially where contact resistance/refusal has already emerged. In infancy and toddlerhood, the clinical analogue is often less “alienation” in the classic sense and more blocked attachment formation caused by conflict, gatekeeping, or lack of safe opportunity for the relationship to develop. [10]

For this report, the age bands used are infants/toddlers (birth to 5 years), school-age children (6 to 12 years), and adolescents (13 to 17 years). Custody contexts include standard divorce/separation cases, high-conflict post-separation families, cases referred for visitation or access refusal, and child-welfare-adjacent reunification settings where the intervention logic overlaps even if the legal facts differ. The child-welfare literature is not alienation-specific, but it is clinically relevant because it contains the strongest U.S. official guidance on safe, trauma-informed reunification planning, family time, kin/community support, and multidisciplinary coordination. [11]

The most important differential diagnosis is between alienation and estrangement. PARQ-Gap work suggests that extreme splitting and lack of ambivalence are more characteristic of severe alienation, whereas maltreated or frightened children are more likely to show mixed, ambivalent representations; however, that tool was developed in a forensic context and should be treated as an adjunct, not a stand-alone diagnostic method. In other words, clinicians should never move from a scale score directly to a reunification plan without corroborating history, safety analysis, and ongoing outcome monitoring. [12]

The official guidance backbone for this review comes from the World Health Organization[3] parenting guideline on , the Association of Family and Conciliation Courts[8] guidance on and , the American Academy of Child and Adolescent Psychiatry[7] policy statement on , and U.S. child welfare guidance from and the Administration for Children and Families[13] Prevention Services Clearinghouse. Those sources do not provide a single alienation-specific clinical pathway, but together they support a coherent staged model centered on safety, trauma-informed care, parenting quality, and relationship repair. [14]

## Concept/chart notation from source research draft

```
flowchart LR
A[Parental alienating behaviors] --> B[Reduced safe contact and blocked repair]
A --> C[Child loyalty bind and distorted narratives]
A --> D[Exposure to chronic conflict / fear]
B --> E[Attachment insecurity and unfamiliarity]
C --> E
D --> F[Trauma symptoms, fear of abandonment, emotional insecurity]
E --> G[Contact resistance / refusal]
F --> G
H[Parenting intervention and conflict containment] --> B
H --> C
I[Child trauma treatment] --> F
J[Dyadic attachment repair] --> E
K[Structured, coached contact] --> G
L[Relapse prevention and aftercare] --> G
```

The causal logic matters because it explains why alienation restoration usually fails when it focuses only on time allocation or compliance. If the child remains frightened, dysregulated, or trapped in a loyalty bind, more contact alone may worsen refusal. The interventions with the best indirect support are those that change the mechanisms in this diagram rather than merely the schedule. [15]

## Intervention evidence and comparative review

The direct alienation-specific treatment literature is still dominated by narrative reviews, model papers, and case-based publications. Darnall's overview of reunification therapy (PMID 21683914 (<https://pubmed.ncbi.nlm.nih.gov/21683914/>)) and Smith's family-based treatment model for parent-child reunification (PMID 27074348 (<https://pubmed.ncbi.nlm.nih.gov/27074348/>)) are clinically useful because they describe common treatment tasks and emphasize early intervention, but they do not provide controlled estimates of effectiveness, relapse, or adverse events. That means the alienation-specific literature can help structure treatment, but it cannot yet justify strong claims that any named reunification therapy is superior to other structured, trauma-informed family interventions. [16]

Stronger evidence exists for component interventions. The WHO parenting guideline synthesizes hundreds of trials and reports moderate-certainty evidence that parenting interventions probably reduce harsh parenting and child maltreatment, improve positive parenting, and reduce child externalizing problems, with smaller but still favorable effects on internalizing problems and parenting stress. In the divorce/separation space, the New Beginnings Program now has both effectiveness-trial and long-term follow-up evidence, which makes it one of the most relevant empirically supported frameworks for high-conflict post-separation families even though it is not an alienation-specific program. [17]

The New Beginnings Program is especially useful because it shows what a court- and community-deliverable parenting program can realistically achieve. In the effectiveness trial, 830 families were randomized; participants were parents of children ages 3 to 18 assigned either to a 10-session parenting program or to a 2-session active comparison, and average attendance in the 10-session condition was only 5.59 sessions. Even with that level of real-world dilution, the program improved parenting and reduced some child mental health problems, and the earlier efficacy-trial lineage showed lower long-run internalizing disorder incidence in young adulthood at 15 years. [18]

For younger children, the most persuasive attachment-repair evidence comes from dyadic and parenting interventions rather than classic "reunification therapy." ABC is a brief 10-session intervention for caregivers of adversity-exposed infants and toddlers; in randomized follow-up work, children whose caregivers received ABC reported higher attachment security at age 9 with a medium effect size of about  $d=0.49$ , and newer randomized neuroimaging follow-up found altered amygdala-prefrontal circuitry consistent with better emotion regulation development. These studies are not alienation trials, but they are unusually relevant to infancy and toddlerhood because they show that early changes in caregiver behavior can have durable relational and regulatory effects years later. [19]

CPP offers a similar lesson for very young children exposed to relational trauma. The recent Swedish follow-up study was naturalistic rather than randomized, but it found six-month sustained benefits after CPP for child posttraumatic stress, caregiver posttraumatic stress, and caregiving disorganization, with within-group effects around  $d=0.57$  to  $d=0.64$ . Because the design lacked a control group, the certainty is lower than in TF-CBT or ABC, but the model remains clinically attractive when the main problem is dysregulated caregiver-child interaction rather than simple rule-breaking. [20]

For school-age children and adolescents with fear, intrusive memories, or marked post-separation distress, TF-CBT has the clearest symptom-treatment evidence. In an eight-clinic randomized trial, TF-CBT for youth ages 7 to 17 produced a moderate between-group effect on clinician-rated PTSD symptoms at four months,  $d=0.50$ , and improved several secondary outcomes including depression, anxiety, posttraumatic cognitions, and CBCL scores. A newer meta-analysis indicates that benefits remain stable across follow-up assessments, which strengthens its role as the preferred child-focused treatment when trauma symptoms are clinically significant during restoration work. [21]

PCIT is most useful when young children show coercive cycles, severe dysregulation, or disruptive behavior during visits or transitions. A 2024 meta-analysis of randomized trials in maltreated or high-risk families found significant benefits for externalizing behavior, parenting skills, parenting stress, and abuse potential,

although the abstract snippet retrieved here did not report pooled standardized effects numerically. A shelter-based pilot in families affected by domestic violence also found improvements among treatment completers, but completion was challenging, which is an important implementation warning for court-involved families with unstable logistics or high coercion. [22]

For adolescents with severe distrust, hopelessness, or suicidality, ABFT is the most relevant attachment-focused family therapy in the NLM literature. In one randomized controlled trial of suicidal adolescents ages 12 to 17, ABFT produced a strong overall effect size of 0.97 for suicidal ideation reduction and higher clinical recovery rates than enhanced usual care, but a later larger RCT found ABFT and an active supportive family treatment both produced large improvements without a significant between-group difference. The most careful reading is that ABFT offers a credible, structured framework for adolescent attachment repair, but clinicians should not oversell it as uniquely superior when a robust active comparison is available. [23]

Community and home-based family supports matter when restoration is threatened by poverty, placement instability, or multi-system stress. On the U.S. official side, the ACF Prevention Services Clearinghouse rates Family Centered Treatment as supported, with typical delivery two or more times per week for about six months and some favorable evidence on out-of-home placement, and rates Intercept as well-supported for intensive in-home work with children from birth to 18 who are at risk of placement or working toward reunification. These are not alienation-specific programs, but they are among the clearest official evidence sources for intensive, home-based, multidisciplinary reunification support. [24]

Court and legal interventions are best understood as enablers rather than stand-alone treatments. AFCC conceptualizes parenting coordination as a child-focused, nonadversarial process to contain post-divorce conflict, and PubMed-indexed literature on parenting coordination is largely conceptual or case-based rather than trial-based. Likewise, the empirical guardian-ad-litem literature is old and more focused on training and role clarity than on direct child mental health outcomes, so legal interventions should be judged primarily by whether they enable a safe, timely, individualized therapeutic plan rather than by presumed therapeutic efficacy of the legal role itself. [25]

The child-welfare literature adds one crucial systems lesson: family time must be timely, individualized, child-safe, and well documented. ACF-associated court-performance review materials state that immediate and frequent parent-child contact helps maintain identity and reduce trauma, and they summarize evidence linking visitation/family time to reunification; they also emphasize natural settings, developmental routines, transportation/logistical supports, and documentation adequate to justify less or more restriction over time. For alienation cases, that means the court’s job is not to order “reunification” in the abstract, but to build the conditions under which safe therapeutic repair can actually occur. [26]

## Comparative table of key interventions and studies

### Table

<b>Intervention or framework</b>	Reunification therapy overview
<b>Population and context</b>	Court-involved divorce; mild to severe alienation/contact refusal
<b>Dose/timing</b>	Variable; not standardized
<b>Design and sample</b>	Narrative clinical review
<b>Main outcomes</b>	Conceptual treatment tasks
<b>Findings most relevant to restoration</b>	Useful framework; stresses earlier intervention; no comparative outcome data
<b>Quality / risk of bias</b>	Very low certainty; no controlled outcomes
<b>Source and PubMed</b>	[27] · PMID 21683914 ( <a href="https://pubmed.ncbi.nlm.nih.gov/21683914/">https://pubmed.ncbi.nlm.nih.gov/21683914/</a> )

<b>Intervention or framework</b>	Family-based reunification model
<b>Population and context</b>	High-conflict divorce; prolonged access refusal
<b>Dose/timing</b>	Variable/unspecified
<b>Design and sample</b>	Narrative model with case illustration
<b>Main outcomes</b>	Family goals, practice recommendations
<b>Findings most relevant to restoration</b>	Helpful for treatment structure; no RCT or controlled effect estimate
<b>Quality / risk of bias</b>	Very low certainty; allegiance and selection issues unresolved
<b>Source and PubMed</b>	[28] · PMID 27074348 ( <a href="https://pubmed.ncbi.nlm.nih.gov/27074348/">https://pubmed.ncbi.nlm.nih.gov/27074348/</a> )

<b>Intervention or framework</b>	New Beginnings Program
<b>Population and context</b>	Divorced/separated families with children 3–18; family-court recruitment
<b>Dose/timing</b>	10 sessions vs 2-session active comparison
<b>Design and sample</b>	Randomized effectiveness trial; 830 families
<b>Main outcomes</b>	Parenting, interparental conflict, child mental health
<b>Findings most relevant to restoration</b>	Real-world trial improved parenting and reduced some child mental health problems; attendance averaged 5.59/10 sessions
<b>Quality / risk of bias</b>	Moderate certainty for post-separation parenting support; not alienation-specific
<b>Source and PubMed</b>	[29] · PMID 30644774 ( <a href="https://pubmed.ncbi.nlm.nih.gov/30644774/">https://pubmed.ncbi.nlm.nih.gov/30644774/</a> )

<b>Intervention or framework</b>	New Beginnings Program long-term follow-up
<b>Population and context</b>	Divorced families; earlier efficacy trial lineage
<b>Dose/timing</b>	Original program exposure; 15-year follow-up
<b>Design and sample</b>	Randomized trial follow-up; N=240 families
<b>Main outcomes</b>	Internalizing disorders, substance-related disorders
<b>Findings most relevant to restoration</b>	15-year incidence of internalizing disorders was lower in intervention vs control; OR 0.26 over the prior 9 years and OR 0.34 over 15 years
<b>Quality / risk of bias</b>	Moderate certainty; long follow-up is a major strength
<b>Source and PubMed</b>	[30] · PMID 23750466 ( <a href="https://pubmed.ncbi.nlm.nih.gov/23750466/">https://pubmed.ncbi.nlm.nih.gov/23750466/</a> )

<b>Intervention or framework</b>	TF-CBT
<b>Population and context</b>	Trauma-exposed youth 7–17 in outpatient clinics
<b>Dose/timing</b>	12 sessions; caregiver participation
<b>Design and sample</b>	Randomized controlled trial; n=159
<b>Main outcomes</b>	PTSS, depression, anxiety, cognitions, CBCL
<b>Findings most relevant to restoration</b>	Superior to waitlist for PTSS at 4 months, $d=0.50$ ; secondary symptom gains also favored TF-CBT
<b>Quality / risk of bias</b>	Moderate certainty for symptom reduction; indirect for alienation restoration
<b>Source and PubMed</b>	[31] · PMID 27043952 ( <a href="https://pubmed.ncbi.nlm.nih.gov/27043952/">https://pubmed.ncbi.nlm.nih.gov/27043952/</a> )

<b>Intervention or framework</b>	TF-CBT durability
<b>Population and context</b>	Trauma-exposed children/adolescents
<b>Dose/timing</b>	Variable by trial
<b>Design and sample</b>	Meta-analysis

<b>Main outcomes</b>	Follow-up stability
<b>Findings most relevant to restoration</b>	Treatment effects remain stable across follow-up; supports durability of symptom work during restoration
<b>Quality / risk of bias</b>	Moderate certainty
<b>Source and PubMed</b>	[32] · PMID 36959760 ( <a href="https://pubmed.ncbi.nlm.nih.gov/36959760/">https://pubmed.ncbi.nlm.nih.gov/36959760/</a> )
<b>Intervention or framework</b>	PCIT
<b>Population and context</b>	Maltreated/high-risk or DV-affected young children
<b>Dose/timing</b>	Varies by protocol; session count not outcome-dependent in meta-analysis
<b>Design and sample</b>	Meta-analysis of RCTs; 11 studies, 1,069 families
<b>Main outcomes</b>	Externalizing, parenting skills, stress, abuse potential
<b>Findings most relevant to restoration</b>	Significant pooled benefits; abstract retrieved did not report pooled SMD numerically
<b>Quality / risk of bias</b>	Moderate certainty for disruptive behavior/coercive cycles; indirect for alienation
<b>Source and PubMed</b>	[33] · PMID 38287915 ( <a href="https://pubmed.ncbi.nlm.nih.gov/38287915/">https://pubmed.ncbi.nlm.nih.gov/38287915/</a> )
<b>Intervention or framework</b>	ABFT
<b>Population and context</b>	Suicidal adolescents 12-17
<b>Dose/timing</b>	3 months in first RCT
<b>Design and sample</b>	RCT; n=66
<b>Main outcomes</b>	Suicidal ideation, depressive symptoms
<b>Findings most relevant to restoration</b>	Strong effect on suicidal ideation, ES 0.97, maintained at follow-up
<b>Quality / risk of bias</b>	Moderate certainty for suicidality/attachment rupture; indirect for alienation
<b>Source and PubMed</b>	[34] · PMID 20215934 ( <a href="https://pubmed.ncbi.nlm.nih.gov/20215934/">https://pubmed.ncbi.nlm.nih.gov/20215934/</a> )
<b>Intervention or framework</b>	ABFT vs active family-enhanced supportive therapy
<b>Population and context</b>	Suicidal adolescents 12-18
<b>Dose/timing</b>	16 weeks
<b>Design and sample</b>	RCT; n=129
<b>Main outcomes</b>	Suicidal ideation, depression
<b>Findings most relevant to restoration</b>	Both groups improved substantially; no significant between-group difference
<b>Quality / risk of bias</b>	Moderate certainty; shows ABFT is credible but not uniquely superior in an active-comparison trial
<b>Source and PubMed</b>	[35] · PMID 30768418 ( <a href="https://pubmed.ncbi.nlm.nih.gov/30768418/">https://pubmed.ncbi.nlm.nih.gov/30768418/</a> )
<b>Intervention or framework</b>	ABC
<b>Population and context</b>	CPS-referred infants later seen in middle childhood
<b>Dose/timing</b>	10 sessions during infancy
<b>Design and sample</b>	RCT follow-up; n=100
<b>Main outcomes</b>	Attachment security
<b>Findings most relevant to restoration</b>	Higher Kerns Security Scale attachment security at age 9, d=0.49
<b>Quality / risk of bias</b>	Moderate certainty for early dyadic repair
<b>Source and PubMed</b>	[36] · PMID 31677152 ( <a href="https://pubmed.ncbi.nlm.nih.gov/31677152/">https://pubmed.ncbi.nlm.nih.gov/31677152/</a> )

<b>Intervention or framework</b>	CPP
<b>Population and context</b>	Traumatized young children 2-6 and caregivers
<b>Dose/timing</b>	Naturalistic course; precise session count unspecified in retrieved abstract
<b>Design and sample</b>	One-group pre/post with 6-month follow-up; n=37
<b>Main outcomes</b>	Child PTSD, caregiver PTSD, caregiving disorganization
<b>Findings most relevant to restoration</b>	Sustained improvements at 6 months; d=0.62 child PTSD, 0.57 caregiver PTSD, 0.64 caregiving disorganization
<b>Quality / risk of bias</b>	Low-to-moderate certainty; uncontrolled design
<b>Source and PubMed</b>	[20] · PMID 41868625 ( <a href="https://pubmed.ncbi.nlm.nih.gov/41868625/">https://pubmed.ncbi.nlm.nih.gov/41868625/</a> )

<b>Intervention or framework</b>	Family Centered Treatment
<b>Population and context</b>	Youth/families at risk of dissolution or working toward reunification
<b>Dose/timing</b>	Typically ≥2 sessions/week for ~6 months; 24/7 support
<b>Design and sample</b>	ACF Clearinghouse evidence summary
<b>Main outcomes</b>	Permanency and placement outcomes
<b>Findings most relevant to restoration</b>	Supported practice; favorable effect size 0.33 on out-of-home placement in reviewed evidence
<b>Quality / risk of bias</b>	Moderate official clearinghouse support; child-welfare, not alienation-specific
<b>Source and PubMed</b>	[37]

<b>Intervention or framework</b>	Intercept
<b>Population and context</b>	Birth-18; risk of placement or re-entry; reunification support
<b>Dose/timing</b>	Intensive in-home; 24/7 crisis support
<b>Design and sample</b>	ACF Clearinghouse evidence summary
<b>Main outcomes</b>	Placement and permanency-related targets
<b>Findings most relevant to restoration</b>	Well-supported in official clearinghouse; useful as community wraparound model
<b>Quality / risk of bias</b>	Moderate official clearinghouse support; not alienation-specific
<b>Source and PubMed</b>	[38]

## Evidence-size chart

The chart below is illustrative only. The outcomes are not directly comparable across conditions, but it gives a rough sense of magnitude for several interventions that are often relevant to restoration planning. [39]

## Concept/chart notation from source research draft

```
xychart-beta
title "Selected reported effects relevant to restoration planning"
x-axis ["ABFT suicidal ideation","TF-CBT PTSS","ABC attachment security","FCT out-of-home placement"]
y-axis "Reported effect size" 0 --> 1.1
bar [0.97,0.50,0.49,0.33]
```

## What to do with weaker or lower-yield interventions

Play therapy is often used for younger children because it is developmentally congruent and can improve engagement, but the broader child externalizing evidence review does not place it alongside the stronger evidence for TF-CBT, PCIT, or parent training; play-based approaches showed inconsistent effects and need more evaluation. Motivational interviewing is best viewed as an engagement style for ambivalent caregivers, not as a proven stand-alone restoration treatment, because the prioritized NLM/.gov literature

reviewed here did not identify alienation-specific MI trials. Parenting coordination can be helpful for conflict containment and implementation of orders, but it should not be mistaken for child trauma treatment or attachment repair. [40]

## Age-specific clinical pathways and practical protocols

A staged pathway is safer than a one-step “reunify now” model. The child-welfare and court-performance literature repeatedly emphasizes that family time should be individualized, safe, routine-consistent, and structured to reduce trauma, while the divorce-conflict literature shows that parenting quality and emotional security are central targets. In practical terms, restoration treatment should move through assessment, stabilization, structured contact, deeper repair, and relapse prevention, with a readiness check before each escalation. [41]

### Concept/chart notation from source research draft

```
flowchart TD
  A[Referral for alienation / contact refusal] --> B[Clarify legal authority, consent, and roles]
  B --> C{Safety screen: abuse, coercive control, frightening parenting, stalking, severe instability?}
  C -- Yes or unclear --> D[Independent safety investigation and trauma stabilization]
  D --> E{Safe to expand contact now?}
  E -- No --> F[Protective plan, therapeutic/supervised contact only, reassess]
  E -- Yes --> G[Differential diagnosis: alienation vs estrangement vs hybrid]
  G -- No --> H[Developmental stage and refusal severity]
  H --> I[Infants/toddlers: dyadic attachment pathway]
  H --> J[School-age: structured contact + symptom treatment + parent coaching]
  H --> K[Adolescents: collaborative attachment-repair pathway]
  I --> L[Measure child distress, routines, and caregiver sensitivity]
  J --> L
  K --> L
  L --> M[Relapse prevention, documentation, aftercare]
```

### Infants and toddlers

For infants and toddlers, the main task is attachment formation and co-regulation, not persuasion. If the rejected parent is relatively unfamiliar, start with high-frequency, low-intensity, predictable contact rather than long, sporadic visits, and coach the parent in nurturance, following the child’s lead, and non-frightening behavior. ABC, other sensitivity-focused attachment work, and child-welfare family-time guidance all support the logic of short predictable routines, repeated greeting/goodbye rituals, and developmentally appropriate play/feeding/reading activities. [42]

A simple infant/toddler protocol is often the most effective:

1. Screen first for fear reactions, medical neglect, rough handling, untreated parental illness, and coercive control. [43]
2. If safe, implement several brief contacts per week, ideally around routine caregiving moments that allow the parent to become a source of soothing and predictability. [44]
3. Use live coaching or video feedback to strengthen parental sensitivity and reduce intrusive or anxious behavior. For many families, an ABC- or VIPP-informed approach is more appropriate than generic talk therapy. [45]
4. If the child and caregiver both show trauma symptoms or dysregulated attachment behavior, layer in a dyadic trauma model such as CPP rather than simply increasing contact time. [46]

### School-age children

School-age children often present with two intertwined problems: distorted or polarized narratives about the rejected parent, and real anxiety, sadness, or anger around contact. In this age band, contact should be structured enough to feel safe but not so artificial that it reinforces pathology; neutral exchanges, concrete shared activities, and explicit protection from adult conflict are usually better than emotionally demanding conversations at the outset. The court-performance and high-conflict divorce literature both support the idea that frequent meaningful contact works best when parenting quality is high and conflict exposure is

low. [47]

A school-age protocol can be run stepwise:

1. Stabilize symptoms and routines first: sleep, school attendance, somatic symptoms, behavior at transitions, and pre-/post-visit distress should be monitored weekly. [48]
2. Treat the child’s symptoms with evidence-based care when indicated. TF-CBT is preferred for trauma symptoms, while PCIT or behavioral parent training is preferred when externalizing and coercive visit dynamics dominate. [49]
3. Run parent coaching in parallel for both caregivers when feasible: stop disparagement, remove loyalty-testing, prohibit interrogation after visits, and teach emotionally regulated responses to the child’s ambivalence rather than pressuring the child to “pick a side.” [50]
4. Expand contact only when the child’s recovery time after contact is shortening, not merely when adults demand more contact. [51]

## Adolescents

Adolescents need more agency and more honesty about the relational rupture. High-control, compliance-heavy approaches often backfire because adolescents are developmentally primed to defend autonomy, and because some have spent years building identity around one-sided family narratives. The adolescent task is not to force affection, but to rebuild enough trust, safety, and curiosity that a relationship can become tolerable and then meaningful again. [52]

A practical adolescent protocol usually includes:

1. Collaborative formulation of what the teenager believes, fears, and hopes will happen if contact resumes. This is essential for distinguishing trauma-driven avoidance from identity- and loyalty-driven resistance. [53]
2. A “choice-with-structure” plan: texts, brief public meetings, shared meals, or short activities may precede home visits or overnight contact. Adolescents typically tolerate graduated exposure to contact better than sudden, total schedule reversal. [54]
3. If depression, self-harm, or suicidality is present, prioritize ABFT-style attachment work or another evidence-based adolescent treatment before pushing contact volume. A destabilized adolescent is not a good candidate for aggressive reunification. [23]
4. Maintain school, peers, extracurriculars, and trusted adults as protective anchors. Child-welfare youth guidance explicitly emphasizes that adolescents need connection to family and other trusted adults while still being treated as experts on themselves. [55]

## Assessment, monitoring, and outcome measurement

Assessment should be multi-informant, staged, and explicitly hypothesis-testing. The clinician’s working questions should be: what maintains the child’s resistance, what evidence supports or weakens a safety concern, what symptoms require treatment before relationship expansion, and what observable markers would show that current contact is helping or harming the child. AFCC’s court-involved therapy guidance is especially useful here because it warns against role confusion, one-sided information gathering, and treatment plans divorced from the actual legal and conflict context. [56]

## Recommended assessment tools

### Table

<b>Domain</b>	Alienation vs estrangement
<b>Recommended tools or measures</b>	PARQ and PARQ-Gap
<b>Ages / use</b>	Mostly school-age/adolescent forensic assessments
<b>Why this is useful</b>	PARQ-Gap distinguished severe alienation from nonalienated comparison children in the original study; useful as an adjunct when polarization is extreme

<b>Limits</b>	Not a stand-alone diagnostic or custody tool; forensic context and severe-case sample limit generalizability
<b>Source and PubMed</b>	[57] · PMID 32069364 ( <a href="https://pubmed.ncbi.nlm.nih.gov/32069364/">https://pubmed.ncbi.nlm.nih.gov/32069364/</a> )
<b>Domain</b>	Exposure history
<b>Recommended tools or measures</b>	Structured inventory of alienating behaviors plus chronology of contact obstruction, denigration, interrogation, fear induction
<b>Ages / use</b>	All ages
<b>Why this is useful</b>	Necessary to specify the actual behaviors rather than rely on labels like “alienation”
<b>Limits</b>	No single universally accepted gold-standard PAB instrument in routine clinical use
<b>Source and PubMed</b>	[58] · PMID 30475019 ( <a href="https://pubmed.ncbi.nlm.nih.gov/30475019/">https://pubmed.ncbi.nlm.nih.gov/30475019/</a> )
<b>Domain</b>	Broad child functioning
<b>Recommended tools or measures</b>	CBCL / ASEBA family of measures
<b>Ages / use</b>	School-age/adolescence; caregiver and sometimes youth versions
<b>Why this is useful</b>	Widely used across TF-CBT, CPP-related, and divorce/post-divorce studies; useful for tracking internalizing/externalizing change
<b>Limits</b>	Broad rather than mechanism-specific; informant bias possible
<b>Source and PubMed</b>	[59]
<b>Domain</b>	Child trauma symptoms
<b>Recommended tools or measures</b>	CAPS-CA, UCLA PTSD Reaction Index, TSCYC/TSCC, child depression/anxiety measures such as CDI and SCARED when indicated
<b>Ages / use</b>	Developmentally selected
<b>Why this is useful</b>	TF-CBT trials and trauma studies use these tools as primary or secondary outcomes
<b>Limits</b>	Use only measures appropriate for developmental level and setting
<b>Source and PubMed</b>	[60]
<b>Domain</b>	Attachment security
<b>Recommended tools or measures</b>	Strange Situation / observational attachment methods for infants; Kerns Security Scale in middle childhood; adolescent attachment measures as clinically indicated
<b>Ages / use</b>	Age-dependent
<b>Why this is useful</b>	ABC follow-up used the Kerns Security Scale and found improved attachment security; broader meta-analysis links attachment measures to internalizing and externalizing problems
<b>Limits</b>	Interpretation must be developmental and contextual; do not over-forensically extend laboratory tools
<b>Source and PubMed</b>	[61] · PMID 31677152 ( <a href="https://pubmed.ncbi.nlm.nih.gov/31677152/">https://pubmed.ncbi.nlm.nih.gov/31677152/</a> ) · PMID 26619212 ( <a href="https://pubmed.ncbi.nlm.nih.gov/26619212/">https://pubmed.ncbi.nlm.nih.gov/26619212/</a> )
<b>Domain</b>	Emotional security and divorce-related process
<b>Recommended tools or measures</b>	Measures of interparental conflict, fear of abandonment, emotional security, parenting quality
<b>Ages / use</b>	Primarily school-age/adolescence
<b>Why this is useful</b>	High-conflict divorce studies show these constructs are plausible mediators and intervention targets
<b>Limits</b>	Not alienation-specific; should complement, not replace, PAB history and safety assessment
<b>Source and PubMed</b>	[62]
<b>Domain</b>	Biomarkers
<b>Recommended tools or measures</b>	Cortisol, neuroimaging, epigenetic markers
<b>Ages / use</b>	Research only

<b>Why this is useful</b>	Parenting intervention trials show stress-system and neural change is measurable; important for future mechanistic work
<b>Limits</b>	Do not use diagnostically in current clinical or forensic practice
<b>Source and PubMed</b>	[63] · PMID 37385583 ( <a href="https://pubmed.ncbi.nlm.nih.gov/37385583/">https://pubmed.ncbi.nlm.nih.gov/37385583/</a> ) · PMID 41196405 ( <a href="https://pubmed.ncbi.nlm.nih.gov/41196405/">https://pubmed.ncbi.nlm.nih.gov/41196405/</a> )

Measurement-based care should track both symptoms and relationship process. At minimum, the team should record contact frequency, setting, supervision level, attendance failures, child distress before/during/after contact, time-to-recovery after contact, school functioning, sleep, intrusive questioning by caregivers, and any sabotage behaviors. The child-welfare court-performance literature specifically recommends documenting the quality and logistics of family time because those data are needed to justify either less or more restriction and to judge whether reunification efforts are actually promoting permanence and safety. [64]

Biomarkers should remain research-only. Recent parental alienation biomarker proposals and ABC neuroimaging follow-up show that stress-system and neural outcomes are scientifically interesting, but they are nowhere near ready for routine diagnosis, credibility assessment, or custody adjudication. For now, the defensible markers of progress are still clinical: reduced symptoms, shorter recovery after contact, lower conflict exposure, and increasing spontaneity and warmth in the child-parent relationship. [65]

## Implementation, legal safeguards, training, and contraindications

The safest implementation model is multidisciplinary and role-specific. A treating clinician should not simultaneously function as a forensic evaluator; a parenting coordinator should not be asked to provide trauma treatment; and legal representatives should not dictate clinical formulation without evidence. AFCC’s court-involved therapy guidance is explicit that court involvement changes treatment, creates special ethical risks, and requires clarity about privilege, reporting, consent, and the therapist’s actual task. [66]

For courts, the most useful practical moves are timeliness, specificity, and measurability. Family-time plans should specify frequency, duration, supervision, location, transportation responsibility, communication rules, and how progress or harm will be reviewed; the child-welfare court-performance literature emphasizes that the safest default is the least restrictive setting consistent with safety and that family time should be proactive, relationship-building, and routine-sensitive. This kind of order is far more useful than a vague instruction to “attend reunification therapy.” [67]

Parenting coordination can be helpful when the central problem is recurring implementation conflict about schedules, communication, and small but relentless disputes that repeatedly destabilize the child. AFCC defines it as a child-focused dispute-resolution process, and the PubMed literature mostly describes the role conceptually or through case work rather than controlled outcome studies. The practical implication is that parenting coordination is best used as conflict containment and behavioral enforcement support, not as a substitute for the child’s therapy or for a formal safety investigation. [68]

Community supports should be used much more deliberately than they often are. Child Welfare Information Gateway emphasizes trauma-informed, family-centered reunification and active engagement of parents, youth, and kin, while ACF’s Prevention Services Clearinghouse identifies supported or well-supported intensive home-based options such as FCT and Intercept. In alienation-related restoration, those programs can provide structure around routines, school coordination, crisis response, kin involvement, and practical barriers that traditional office therapy often cannot manage alone. [69]

Training and fidelity matter because these cases are unusually vulnerable to clinician drift, confirmation bias, and role inflation. Model-specific training and supervision are clearly described in official sources for child-welfare family programs such as FFT-CW, and supported family services like FCT and Intercept also specify supervision and implementation infrastructure. For clinicians doing restoration work, the minimum standard should be competence in a core evidence-based child/family model relevant to the child’s

presentation, regular supervision, and a fidelity process such as session checklists or structured case review. [70]

Some situations are strong contraindications to fast or forceful reunification. These include unresolved abuse or coercive control, stalking or post-separation domestic violence, active intimidation of the child, acute panic or suicidality triggered by contact, and programs that rely on physical coercion, forced isolation, or humiliation. AACAP's attachment-disorder policy is not about alienation specifically, but its opposition to dangerous coercive "attachment" interventions is directly relevant as a safety principle for any reunification program claiming to repair attachment by force. [71]

A concise contraindication checklist is useful in practice:

Do not escalate contact when safety facts are unresolved or credible abuse allegations remain under active investigation. [53]

Do not use a single alienation instrument as a substitute for full differential diagnosis. [57]

Do not force emotionally intimate tasks before the child can tolerate basic safe contact and recover afterward. [72]

Do not continue a failing protocol blindly; if distress, refusals, or sabotage worsen, step back, restabilize, and reformulate. [64]

## **Research agenda and prioritized studies**

The main evidence gap is simple: there is still no large, low-bias, alienation-specific randomized trial program comparable to the evidence base for TF-CBT, PCIT, or parenting interventions. At the same time, there is enough adjacent evidence to build a serious next-generation research agenda. The stranded middle is the current reality of practice: clinicians are asked to treat a high-stakes problem with a mixture of narrative alienation models and stronger but indirect evidence from trauma, attachment, parenting, and reunification science. [73]

A first priority is a pragmatic stepped-care trial for court-referred contact resistance/refusal cases. Families would be randomized by court or service region to a staged pathway versus treatment-as-usual, with hard safety gates, role separation, and predefined criteria for escalating contact. A reasonable design would enroll 400 to 600 families and evaluate contact stability, child symptom change, school attendance, adverse events, re-litigation, and caregiver sabotage behaviors at 3, 6, 12, and 24 months. [74]

A second priority is an optimization trial that explicitly tests which components add value. The high-conflict post-separation optimization protocol already underway in the broader divorce field is a good template: build components around parenting quality, emotional security, child coping, and conflict reduction, then determine which combinations yield the best outcomes with the least burden. For alienation-related restoration, the obvious experimental components are parent coaching intensity, child trauma treatment inclusion, supervised-to-unsupervised transition speed, and aftercare duration. [75]

A third priority is a birth-to-five blocked-attachment trial. Infants and toddlers are badly underrepresented in the alienation literature, yet they may be the group in which repair is most biologically and developmentally plausible if conflict is contained early. A trial could compare an ABC- or VIPP-informed dyadic path plus structured family-time coaching against usual reunification services in 200 to 300 court-involved or high-conflict separated families with children under age 5, with endpoints including attachment security, cortisol patterns, caregiver sensitivity, visit distress, and durable contact at 12 and 24 months. [76]

A fourth priority is legal-systems effectiveness research. Despite intense policy debate, the field still lacks good comparative evidence on expedited hearings, parenting coordination, child-focused legal representation, and other procedural tools as they affect child mental health and stable restoration. Large registry-linked or court-administrative studies could test whether timelier hearings, better family-time

documentation, or child-representation models reduce prolonged no-contact periods, re-litigation, or symptom escalation. [77]

## Proposed study portfolio

### Table

<b>Proposed study</b>	Staged restoration pathway vs usual care
<b>Population</b>	Court-referred access refusal / alienation-hypothesis families, ages 4-17
<b>Design</b>	Pragmatic cluster RCT by court/service site
<b>Sample size target</b>	400-600 families
<b>Main endpoints</b>	Contact stability, child symptoms, adverse events, sabotage behaviors, re-litigation
<b>Timeline</b>	2-3 years primary follow-up; 5 years extended
<b>Why it matters</b>	Directly tests whether a safety-gated, evidence-informed pathway improves outcomes over usual fragmented practice [78]
<b>Proposed study</b>	Component optimization trial
<b>Population</b>	High-conflict post-separation families with early resistance/refusal
<b>Design</b>	Factorial or MOST design
<b>Sample size target</b>	250-400 families
<b>Main endpoints</b>	Which components improve parenting quality, emotional security, and symptom change most efficiently
<b>Timeline</b>	18-24 months
<b>Why it matters</b>	Builds on the ongoing post-separation optimization model and addresses implementation efficiency [79]
<b>Proposed study</b>	Birth-to-five blocked-attachment trial
<b>Population</b>	Infants/toddlers in high-conflict separation with impaired relationship formation
<b>Design</b>	RCT: ABC/VIPP-informed dyadic model vs usual reunification services
<b>Sample size target</b>	200-300 families
<b>Main endpoints</b>	Attachment security, parental sensitivity, child distress with contact, biomarkers as research-only outcomes
<b>Timeline</b>	24 months
<b>Why it matters</b>	Fills the largest developmental gap in the literature [80]
<b>Proposed study</b>	Legal/process evaluation study
<b>Population</b>	Court systems handling high-conflict family cases
<b>Design</b>	Registry-based comparative effectiveness or stepped-wedge implementation study
<b>Sample size target</b>	Multi-jurisdictional; thousands of cases feasible
<b>Main endpoints</b>	Hearing timeliness, no-contact duration, family-time frequency/quality, re-litigation, child mental health referrals
<b>Timeline</b>	3-5 years
<b>Why it matters</b>	Provides the missing evidence on legal supports that currently drive practice more than data do [77]

The bottom-line research message is that the field does not need one more loosely defined reunification program report. It needs comparative trials with explicit safety exclusions, developmental stratification, adverse-event monitoring, manualized components, fidelity checks, and long enough follow-up to measure relapse and durable relationship change. Until those studies exist, the most rigorous practice is to use a staged, safety-first, mechanism-focused model that borrows the strongest available evidence from parenting, attachment, trauma, and family-systems science. [81]

[1] [10] [50] [58] <https://pubmed.ncbi.nlm.nih.gov/30475019/>  
<https://pubmed.ncbi.nlm.nih.gov/30475019/>

[2] [16] [27] [73] <https://pubmed.ncbi.nlm.nih.gov/21683914/>  
<https://pubmed.ncbi.nlm.nih.gov/21683914/>

[3] [11] [69] <https://www.childwelfare.gov/topics/permanency/reunifying-families/?top=117>  
<https://www.childwelfare.gov/topics/permanency/reunifying-families/?top=117>

[4] [17] <https://www.ncbi.nlm.nih.gov/books/NBK589376/>  
<https://www.ncbi.nlm.nih.gov/books/NBK589376/>

[5] [21] [31] [48] [49] [59] [60] <https://pubmed.ncbi.nlm.nih.gov/27043952/>  
<https://pubmed.ncbi.nlm.nih.gov/27043952/>

[6] [7] [15] [62] <https://pubmed.ncbi.nlm.nih.gov/31318261/>  
<https://pubmed.ncbi.nlm.nih.gov/31318261/>

[8] [63] <https://pubmed.ncbi.nlm.nih.gov/37385583/>  
<https://pubmed.ncbi.nlm.nih.gov/37385583/>

[9] [13] [43] [71] [https://www.aacap.org/aacap/Policy\\_Statements/2022/Policy\\_Statement\\_Coercive\\_Interventions\\_Attachment\\_Disorders.aspx](https://www.aacap.org/aacap/Policy_Statements/2022/Policy_Statement_Coercive_Interventions_Attachment_Disorders.aspx)  
[https://www.aacap.org/aacap/Policy\\_Statements/2022/Policy\\_Statement\\_Coercive\\_Interventions\\_Attachment\\_Disorders.aspx](https://www.aacap.org/aacap/Policy_Statements/2022/Policy_Statement_Coercive_Interventions_Attachment_Disorders.aspx)

[12] [53] [57] <https://pubmed.ncbi.nlm.nih.gov/32069364/>  
<https://pubmed.ncbi.nlm.nih.gov/32069364/>

[14] <https://www.ncbi.nlm.nih.gov/books/NBK589381/>  
<https://www.ncbi.nlm.nih.gov/books/NBK589381/>

[18] [29] <https://pmc.ncbi.nlm.nih.gov/articles/PMC6642686/>  
<https://pmc.ncbi.nlm.nih.gov/articles/PMC6642686/>

[19] [36] [42] [45] [61] [76] [80] <https://pubmed.ncbi.nlm.nih.gov/31677152/>  
<https://pubmed.ncbi.nlm.nih.gov/31677152/>

[20] [46] <https://pubmed.ncbi.nlm.nih.gov/41868625/>  
<https://pubmed.ncbi.nlm.nih.gov/41868625/>

[22] [33] <https://pubmed.ncbi.nlm.nih.gov/38287915/>  
<https://pubmed.ncbi.nlm.nih.gov/38287915/>

[23] [34] [39] [52] [54] <https://pubmed.ncbi.nlm.nih.gov/20215934/>  
<https://pubmed.ncbi.nlm.nih.gov/20215934/>

[24] [37] <https://preventionservices.acf.hhs.gov/programs/805/show>  
<https://preventionservices.acf.hhs.gov/programs/805/show>

[25] [68] <https://www.afccnet.org/Resource-Center/Center-for-Excellence-in-Family-Court-Practice/afcc-parenting-coordination-task-force-2017-2019>

<https://www.afccnet.org/Resource-Center/Center-for-Excellence-in-Family-Court-Practice/afcc-parenting-coordination-task-force-2017-2019>

[26] [41] [47] [51] [64] [67]

[https://capacity.childwelfare.gov/sites/default/files/media\\_pdf/cw-court-performance-resource-review.pdf](https://capacity.childwelfare.gov/sites/default/files/media_pdf/cw-court-performance-resource-review.pdf)

[https://capacity.childwelfare.gov/sites/default/files/media\\_pdf/cw-court-performance-resource-review.pdf](https://capacity.childwelfare.gov/sites/default/files/media_pdf/cw-court-performance-resource-review.pdf)

[28] <https://pubmed.ncbi.nlm.nih.gov/27074348/>

<https://pubmed.ncbi.nlm.nih.gov/27074348/>

[30] <https://pubmed.ncbi.nlm.nih.gov/23750466/>

<https://pubmed.ncbi.nlm.nih.gov/23750466/>

[32] <https://pubmed.ncbi.nlm.nih.gov/36959760/>

<https://pubmed.ncbi.nlm.nih.gov/36959760/>

[35] <https://pubmed.ncbi.nlm.nih.gov/30768418/>

<https://pubmed.ncbi.nlm.nih.gov/30768418/>

[38] <https://preventionservices.acf.hhs.gov/programs/831/show>

<https://preventionservices.acf.hhs.gov/programs/831/show>

[40] <https://pubmed.ncbi.nlm.nih.gov/35212851/>

<https://pubmed.ncbi.nlm.nih.gov/35212851/>

[44] [https://www.childwelfare.gov/pubPDFs/factsheets\\_families\\_familytime.pdf](https://www.childwelfare.gov/pubPDFs/factsheets_families_familytime.pdf)

[https://www.childwelfare.gov/pubPDFs/factsheets\\_families\\_familytime.pdf](https://www.childwelfare.gov/pubPDFs/factsheets_families_familytime.pdf)

[55] <https://www.childwelfare.gov/topics/youth/>

<https://www.childwelfare.gov/topics/youth/>

[56] [66] [72] [78] [81] <https://www.afccnet.org/Resource-Center/Center-for-Excellence-in-Family-Court-Practice/afcc-task-force-on-guidelines-for-court-involved-therapy>

<https://www.afccnet.org/Resource-Center/Center-for-Excellence-in-Family-Court-Practice/afcc-task-force-on-guidelines-for-court-involved-therapy>

[65] <https://pubmed.ncbi.nlm.nih.gov/41196405>

<https://pubmed.ncbi.nlm.nih.gov/41196405>

[70] <https://preventionservices.acf.hhs.gov/programs/417/show>

<https://preventionservices.acf.hhs.gov/programs/417/show>

[74] [75] [79] <https://pubmed.ncbi.nlm.nih.gov/38496232/>

<https://pubmed.ncbi.nlm.nih.gov/38496232/>

[77] <https://pubmed.ncbi.nlm.nih.gov/2039848/>

<https://pubmed.ncbi.nlm.nih.gov/2039848/>