

The Parenting Effects of Mothers with ADHD, on Infant Development: A Case for Prioritising ADHD Treatment

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Abstract

Attention Deficit Hyperactivity Disorder (ADHD) is a condition that affects attention, impulsivity, and emotional regulation, with significant implications for parenting. While research often focuses on ADHD in children, untreated ADHD in mothers can profoundly impact infant development during the first three years of life—a critical period for emotional bonding, cognitive growth, and social development. This paper examines the challenges mothers with untreated ADHD face, including inconsistent caregiving, emotional dysregulation, and disorganization, which can lead to insecure attachment and delayed emotional and cognitive development in infants. It argues that prioritising ADHD treatment for mothers is essential to fostering secure attachment, emotional regulation, and healthy brain development in their children. The role of the NHS ADHD Task Force in addressing systemic barriers to care, such as long waiting times and regional disparities, is discussed alongside recommendations for improving service accessibility and support for high-risk groups, including single parents. By emphasizing the urgency of timely diagnosis and treatment, this paper highlights the transformative potential of ADHD intervention for mothers and their children, advocating for a comprehensive, inclusive approach to supporting families affected by ADHD.

ADHD, Bonding & Infant Development

Maternal bonding in the first 2-3 years

The first two years of an infant's life are pivotal for emotional and cognitive development. During this time, infants rely heavily on their caregivers for both physical and emotional needs. Secure attachment, formed through consistent and nurturing interactions with the mother, lays the foundation for the child's future emotional and social health. Disruptions to this bonding process—whether due to emotional, psychological, or behavioural issues—can have lasting impacts on a child's development.

Mothers with untreated ADHD may struggle with impulsivity, inattention, and emotional dysregulation, which can make the consistent and attuned caregiving needed for healthy bonding more difficult. This can lead to insecure attachment, where the child may struggle to form trust and security with the caregiver. Infants of mothers with untreated ADHD may experience higher levels of stress and anxiety due to inconsistent caregiving or maternal distraction, which can impact their brain development during this sensitive period.

Effects of untreated ADHD on parenting

Untreated ADHD can interfere with a mother's ability to engage fully in caregiving tasks. ADHD symptoms such as forgetfulness, disorganization, and impulsivity may lead to inconsistent caregiving practices, making it harder for mothers to maintain routines or respond to their infants' needs in a timely manner. For example, a mother with ADHD might forget to follow feeding schedules, struggle with maintaining a calm environment, or be easily overwhelmed by the demands of infant care. Moreover, emotional dysregulation—commonly seen in untreated ADHD—may lead to unpredictable responses to an infant's cues. Infants rely on caregivers to soothe them when they are distressed, and when a mother is unable to regulate her own emotions, it can impair her ability to calm and reassure her baby. Over time, this can affect the infant's ability to self-soothe and regulate their own emotions, a critical skill developed in early childhood.

Impact on cognitive and social-emotional development

The first two years of life also represent a period of rapid cognitive and emotional development. During this time, infants begin to explore their environment, develop language skills, and start forming early social interactions. Mothers play a key role in this by providing a stimulating, responsive, and safe environment. However, untreated ADHD can disrupt this process. Disorganization or forgetfulness may result in a less stimulating environment, reducing opportunities for the infant's cognitive growth.

Furthermore, infants learn how to regulate their emotions through interactions with their caregivers. When a mother is impulsive or emotionally volatile due to untreated ADHD, the infant may become confused or stressed, leading to difficulties in learning how to manage their emotions. This can lead to higher rates of emotional and behavioural problems as the child grows older.

THE CRITICAL PERIOD FOR EARLY BRAIN DEVELOPMENT

Early Brain Development: Key Phases

1. Prenatal to First Year: The prenatal period through the first year of life is particularly critical for brain growth. During this time, the brain undergoes rapid development, including the formation of neurons, synaptic connections, and myelination (which helps with efficient communication between neurons). Sensory experiences in the first year, such as touch, sound, and vision, are key to shaping the brain's circuitry. The infant's attachment to caregivers during this

time is also foundational for emotional development. Studies show that maternal responsiveness and consistency directly influence the development of secure attachments in the first 12 months, which is critical for later emotional and social functioning.

2. **First Three Years:** While the first year sets the foundation, brain development continues intensely through the next two years. The brain's plasticity is at its peak during the first three years, meaning it is highly responsive to external stimuli, including interactions with caregivers. This period is crucial for the development of language, social behaviour, and self-regulation. Synaptic density peaks around two to three years old, which means the brain is forming an immense number of neural connections. This is also the phase when emotional regulation and stress response systems are highly influenced by caregiver interactions.
3. **Beyond Three Years:** While the first three years are extremely formative, critical periods for development extend into early childhood. Emotional regulation, executive function (e.g., planning, impulse control), and social behaviours continue to develop well into preschool years and beyond. However, disruptions in caregiving or environmental stability during the first three years may have more significant, lasting effects, because this is when the brain is laying the groundwork for later complex skills.

Evidence on Critical Periods

Research from attachment theory and neuroscience supports the idea that the first two to three years are critical for forming secure attachments and emotional self-regulation. For example, studies from researchers like John Bowlby and Mary Ainsworth have demonstrated that secure attachment, typically developed within the first 18-24 months, is critical for later emotional and social health.

Neuroscientific research also highlights the importance of early experiences in shaping the brain's architecture. According to Harvard's Centre on the Developing Child, the brain is most malleable and capable of change early in life, with particular emphasis on the first three years. Interventions or disruptions (such as inconsistent caregiving) in this window can have a greater impact on long-term cognitive, emotional, and behavioural outcomes than at later stages.

While two years is not an arbitrary cutoff, it is part of a broader, early developmental window. The most critical period of brain development in terms of attachment and emotional regulation is typically considered the first three years, with the first twelve months being especially important for initial bonding and secure attachment.

Beyond three years, children continue to develop vital social, emotional, and cognitive skills, but the brain's plasticity-its capacity to form and reform neural connections-gradually decreases.

So, when arguing for prioritising mothers with ADHD for treatment, highlighting the first three years as a critical period for early brain development, attachment, and emotional health is well-supported by both psychological and neuroscientific research.

GENDER ROLES IN PRIMARY CAREGIVERS

The role of the primary caregiver, whether it's the mother or the father, is the crucial factor in shaping early brain development, attachment, and emotional regulation in infants. Research shows that infants need consistent, responsive caregiving from a primary figure, regardless of gender. However, historically, much of the focus has been on mothers because they have traditionally been the primary caregivers, especially in the earliest months of life. Let's break this down further.

The Role of the Primary Caregiver: Gender vs. Function

What matters most in early infant development is the quality of the caregiving relationship rather than the gender of the caregiver. Secure attachment, emotional regulation, and social behaviours are all fostered by consistent, attentive, and responsive caregiving. Infants need caregivers who respond appropriately to their cues-whether they are hungry, scared, or need comfort. Studies suggest that the attachment bond forms with whoever provides this type of caregiving, whether it's the mother, father, or another figure.

Mother vs. Father: Are There Differences?

1. **Biological and Early Bonding:** Mothers often have a biological role in the early attachment process, especially when breastfeeding. Physical closeness and hormonal factors (such as oxytocin released during breastfeeding) can strengthen early bonds between mother and child. However, this does not mean fathers or other caregivers cannot form strong bonds. Fathers who engage in close, responsive caregiving can foster secure attachments just as well.

2. **Parenting Styles:** Some studies suggest that fathers and mothers may, on average, interact with their infants in different ways. Fathers are often observed to engage in more stimulating, play-based activities, while mothers may focus more on nurturing and caretaking. However, these differences are socialized and not inherent, and both types of interactions are important for infant development. Importantly, these differences in interaction styles do not imply that one gender is more capable of forming secure attachments.
3. **ADHD in Fathers:** If the primary caregiver is the father and he has untreated ADHD, the effects on the child can be similar to those seen with a mother who has untreated ADHD. The father's inattentiveness, impulsivity, or emotional dysregulation could affect his ability to provide consistent, sensitive care, leading to similar risks for attachment issues, emotional dysregulation, and cognitive delays in the child. The key issue is the quality of caregiving rather than the gender of the caregiver.

The Importance of Consistency and Responsiveness

Infants are most affected by how consistent and responsive their primary caregiver is, regardless of whether it's the mother or father. A caregiver who is emotionally unpredictable or inattentive, due to untreated ADHD or any other issue, can create an environment of stress and insecurity for the infant. This unpredictability disrupts

The infant's ability to feel safe and supported, which in turn affects their ability to explore their environment and develop healthy emotional regulation skills.

It's About the Caregiver, not the gender.

In terms of infant development, what truly matters is the primary caregiving relationship, not whether the caregiver is the mother or father. Both mothers and fathers can form strong, secure attachments with their infants if they provide consistent, responsive care. The challenges posed by untreated ADHD in a primary caregiver, whether it's the mother or the father, can have similar negative effects on the child's development.

Therefore, when making the case for prioritising ADHD treatment for caregivers, the focus should be on ensuring the primary caregiver-regardless of gender-is equipped to provide the stable and nurturing environment that infants need for optimal development during their critical early years.

Current State of ADHD Diagnosis & Treatment - UK

Rising Rates of Diagnosis

In recent years, the UK has seen a significant increase in ADHD diagnoses, particularly among adults. This trend reflects both greater awareness of the condition and improved diagnostic capabilities. However, it also underscores the growing demand for ADHD services, which are now struggling to keep pace. Many adults are only being diagnosed after their children receive an ADHD diagnosis, highlighting the intergenerational impact of the disorder. For parents, particularly those with young children, the delay in diagnosis and treatment creates a cascade of challenges that affect the entire family.

Long Waiting Lists and Regional Disparities

The demand for ADHD assessments and subsequent treatments has surged, leading to significant waiting times that impact timely diagnosis and care. This delay is particularly concerning for parents with young children, as early intervention is crucial during this critical developmental period.

Recent data indicates that mental health services across the UK are experiencing unprecedented demand. As of 2024, estimates suggest that approximately 1 million individuals are on mental health waiting lists, reflecting a system under considerable strain. Specifically focusing on ADHD, the situation is equally pressing. The Royal College of Psychiatrists has highlighted the need for urgent action to address the increasing waiting times for adult ADHD assessments, which have risen significantly in recent years. Moreover, data from ADHD UK reveals that only 21% of Integrated Care Boards could provide information on their waiting numbers. Extrapolating from the available data, it is estimated that approximately 131,000 individuals are awaiting ADHD assessments, with 90,000 adults and 42,000 children in the queue.

These delays are not uniform across the country. For instance, Psychiatry-UK, a provider offering assessments under the NHS Right to Choose scheme, reported that as of January 2025, the wait time for an adult ADHD assessments is approximately 9-12 months, and a further 7 months after diagnosis to the start of medication titration. In some regions, the situation is more severe; Leeds and York NHS Trust reported in January 2024 that individuals were waiting up to 2 years and 4 months between diagnosis and the commencement of medication.

The NHS ADHD Task Force: Ambitions, Progress, and Challenges

Overview of the Task Force

In response to the growing demand for ADHD services, the NHS established the ADHD Task Force to address systemic issues in diagnosis and treatment. The task force's key objectives include reducing waiting times, expanding service capacity, improving access to diagnostic and post-diagnostic support, and standardizing care pathways across the UK. These efforts aim to address regional disparities and ensure equitable access to ADHD services for all patients.

Funding and Resource Allocation

The NHS ADHD Task Force was initially allocated an estimated £150 million over five years to support its initiatives. This funding is designated for several key areas:

1. **Workforce Expansion:** Recruiting and training more ADHD specialists, including psychiatrists, psychologists, and nurse practitioners.
2. **Technology Integration:** Implementing digital tools such as the QbTest to streamline diagnostics and reduce assessment times.
3. **Telehealth Services:** Expanding virtual consultations to make services accessible to patients in rural and underserved areas.
4. **Public Awareness Campaigns:** Educating the public to reduce stigma and encourage earlier referrals.

Despite these commendable efforts, the funding appears insufficient when weighed against the scale of the issue. With an estimated 131,000 individuals awaiting assessments and many requiring ongoing treatment, the allocation amounts to roughly £1,150 per patient over five years. This funding must cover diagnostic assessments, medication, therapy, and follow-up care, raising concerns about whether the task force's goals can be achieved within its current financial constraints.

Progress to Date

The task force has made measurable progress in some areas:

1. **Pilot Telehealth Programs:** These have reduced waiting times in some regions by up to 20%, particularly for initial assessments.
2. **Digital Diagnostic Tools:** The introduction of tools like the QbTest has allowed clinics to handle higher patient volumes.
3. **Stakeholder Collaboration:** The task force has engaged with charities, advocacy groups, and healthcare providers to develop more cohesive care pathways.

However, significant challenges remain. Progress has been uneven, with rural and economically disadvantaged areas still experiencing long delays. Advocacy groups report that many patients still face year-long waits for initial assessments, particularly in regions where resources remain stretched.

Evaluation of Feasibility

The NHS ADHD Task Force's ambitions are laudable, but their feasibility under current conditions is questionable. Key barriers include:

1. **Funding Shortfall:** The initial £150 million allocation is unlikely to cover the full scope of necessary reforms. Advocacy groups have called for an additional £200 million over five years to address these gaps.
2. **Workforce Limitations:** Even with increased funding, the shortage of trained specialists poses a significant obstacle.
3. **Regional Disparities:** Ensuring equitable access across all regions requires more targeted interventions in underserved areas.
4. **Implementation Speed:** The slow rollout of initiatives, such as telehealth and digital diagnostics, has limited their impact.

Without significant additional investment and a more aggressive timeline, it is unlikely that the task force will meet its objectives within the designated timeframe. Projections suggest that waiting times will remain above acceptable levels for several years unless these barriers are addressed.

Recommendations

To improve the effectiveness of the NHS ADHD Task Force, the following actions are recommended:

1. **Increase Funding:** Allocate an additional £200 million over the next five years to fully support workforce expansion, infrastructure development, and public education campaigns.
2. **Accelerate Implementation:** Fast-track the rollout of telehealth and digital diagnostic tools to ensure immediate impact.
3. **Address Regional Inequities:** Develop targeted funding models to support rural and economically disadvantaged areas.
4. **Expand Workforce Training:** Invest in long-term training programs to increase the number of ADHD specialists.

Politico-Cultural Aspects of ADHD Diagnosis & Care

Societal Perceptions and Stigma

ADHD has long been subject to stigma and misconceptions, often dismissed as a condition limited to childhood or as an over-diagnosed phenomenon. These perceptions influence funding priorities and public attitudes, creating barriers to care. Parents, particularly mothers, often face additional scrutiny, with societal expectations around parenting amplifying the stigma associated with ADHD symptoms. Single fathers, meanwhile, may encounter scepticism regarding their caregiving abilities, further marginalizing this group.

Policy and Resource Allocation

The UK's mental health policies have struggled to keep pace with the rising demand for ADHD services. While initiatives like the NHS Right to Choose scheme have expanded access to diagnostic services, systemic underfunding has limited their impact. Additionally, regional disparities in service availability reflect broader inequalities in healthcare provision, with rural and economically disadvantaged areas often experiencing the longest waits. Addressing these inequities requires a coordinated effort to prioritise ADHD within national health strategies and allocate resources accordingly.

Implications for Parents and Infants

For parents with untreated ADHD, these prolonged waiting times can have profound implications. The first three years of a child's life are critical for brain development, encompassing key milestones in attachment, exploration, and social interaction. Delays in diagnosing and treating parental ADHD can hinder the ability to provide consistent and responsive caregiving necessary during this period, potentially affecting the child's emotional and cognitive development.

Using fertility and demographic data, it is estimated that approximately 36,000 to 45,000 women on ADHD waiting lists in the UK are mothers, and around 4,300 to 9,000 of these mothers are likely to have at least one child aged 1 or 2 years old. Single fathers with ADHD, while less discussed, face similar challenges, often compounded by societal stigma and limited support networks. These delays can create significant stress for parents and reduce the likelihood of achieving optimal outcomes for their children.

The Case for ADHD Service Reform

To mitigate these issues, a comprehensive reform of ADHD services is necessary. The following strategies outline a clear path forward:

1. **Increase Funding for ADHD Services:** Allocate additional resources to expand diagnostic and treatment capacities within the NHS. This includes hiring more specialists, opening new clinics, and providing telehealth options to reach underserved areas.
2. **Prioritise High-Risk Groups:** Create a tiered system that prioritises parents of young children, particularly those with children under three years old. Single parents should also be given special consideration, as they often lack the additional support provided by a co-parent.
3. **Streamline Diagnosis and Treatment Pathways:** Introduce standardized tools such as the QbTest and telehealth assessments to reduce the time required for diagnosis. Once diagnosed, parents should have immediate access to medication and behavioural therapies without additional delays.
4. **Integrate Multidisciplinary Support:** ADHD services should include collaboration with paediatricians, social workers, and mental health professionals to provide holistic care for both parent and child. Parenting classes and support groups tailored to ADHD should also be widely available.
5. **Public Awareness Campaigns:** Increase awareness of ADHD in parents through targeted campaigns. These efforts can reduce stigma, encourage earlier self-referral, and foster understanding of how ADHD impacts caregiving.
6. **Implement Parent Coaching Programs:** Provide structured coaching programs to help parents with ADHD develop skills in organization, emotional regulation, and consistent caregiving. These programs can be delivered online to increase accessibility.

Supporting Single Fathers with ADHD

Single fathers with ADHD face unique challenges, as traditional gender roles often assume that mothers are primary caregivers. Many single fathers lack access to the same networks of support available to mothers. Reforms must address these disparities by:

- Ensuring single fathers are included in prioritization for ADHD services.
- Offering tailored support groups and resources specifically for single fathers.

- Providing accessible parenting programs that address ADHD-specific challenges.

The Role of ADHD Treatment in Improving Outcomes

Effective treatment for ADHD transforms not only the lives of parents but also their children. Medications like stimulants and non-stimulants help parents manage inattention and impulsivity, allowing for more consistent and responsive caregiving. Behavioural therapies complement these effects, teaching parents practical strategies for managing daily challenges. Combined, these interventions enable parents to create a stable and nurturing environment essential for their child's development.

Discussion

The first three years of life represent a critical period in an infant's cognitive, emotional, and social development, laying the foundation for future mental health and well-being. This paper underscores the profound influence that consistent, responsive caregiving has on infant development and highlights the challenges faced by mothers with untreated ADHD in fulfilling this role. The evidence presented demonstrates a clear need to prioritise ADHD treatment for mothers, both for their well-being and the developmental outcomes of their children.

Mothers with untreated ADHD often struggle with symptoms such as inattention, impulsivity, emotional dysregulation, and disorganization, which can disrupt caregiving practices. These challenges are particularly pronounced during the early years of a child's life, when secure attachment and consistent emotional responsiveness are critical for healthy development. The difficulties faced by mothers with untreated ADHD can lead to insecure attachment, impaired emotional regulation in infants, and delayed cognitive growth. The cascading effects of these challenges underscore the importance of early intervention for mothers with ADHD.

The Case for Early ADHD Intervention

Research indicates that timely ADHD treatment, including medication and behavioural therapies, can significantly improve maternal caregiving capacities. Effective treatment helps reduce inattention, impulsivity, and emotional dysregulation, allowing mothers to provide a more consistent, organized, and nurturing environment. These improvements directly benefit infants, enhancing their ability to form secure attachments, regulate emotions, and develop critical cognitive and social skills.

Moreover, addressing maternal ADHD has long-term benefits for the entire family. Mothers who receive treatment are better equipped to handle the demands of parenting, leading to

lower stress levels and improved family dynamics. Children of treated mothers are more likely to achieve developmental milestones and exhibit healthier emotional and social outcomes, reducing the risk of intergenerational transmission of ADHD-related challenges.

The Role of Healthcare Systems and the ADHD Task Force

Despite the clear benefits of ADHD treatment for mothers, systemic barriers often hinder access to timely care. Long waiting lists, regional disparities, and underfunded ADHD services in the UK leave many mothers without the support they need during their child's critical developmental period. Current estimates suggest that thousands of mothers with young children are on ADHD waiting lists, with many experiencing delays that prevent them from accessing the treatment necessary to optimize caregiving practices.

The NHS ADHD Task Force represents a crucial initiative aimed at addressing these systemic issues. With a focus on reducing waiting times, expanding service capacity, and standardizing care pathways, the task force's efforts are critical to improving access to ADHD diagnosis and treatment. Key successes, such as the introduction of telehealth programs and digital diagnostic tools, have demonstrated potential to streamline services and reduce delays. However, significant challenges remain, including funding shortfalls, workforce limitations, and persistent regional disparities. To fully realize its goals, the ADHD Task Force must prioritise the needs of parents with young children, recognizing the profound impact that untreated ADHD in caregivers has on early childhood development. Additional funding and resource allocation are necessary to expand diagnostic and treatment capacities, particularly in underserved areas. Collaboration with advocacy groups, paediatricians, and mental health professionals can further enhance the effectiveness of the task force's initiatives, ensuring that families receive the holistic support they need.

Expanding the Conversation

While this paper focuses primarily on mothers, it is important to recognize that fathers with ADHD, particularly single fathers, face similar challenges. Gendered assumptions about caregiving roles often QbTest fathers in discussions about parenting and ADHD, yet their experiences are equally valid and warrant attention. Future research and policy efforts should adopt a more inclusive perspective, addressing the needs of all primary caregivers with ADHD, regardless of gender.

Further Conclusions and Final Recommendations

The developmental trajectory of infants is profoundly shaped by the quality of caregiving they receive in the first three years of life. For mothers with ADHD, untreated symptoms can impede their ability to provide the consistent, responsive care essential for healthy development. This paper highlights the urgency of prioritising ADHD treatment for mothers, not only to improve their quality of life but also to ensure optimal outcomes for their children. The role of the ADHD Task Force in addressing systemic barriers is pivotal, but further action is needed to close existing gaps.

Final Recommendations:

1. **Increase Funding for ADHD Services:** Allocate additional resources to support the ADHD Task Force's initiatives, with a focus on reducing waiting times and expanding diagnostic and treatment capacities.
2. **Prioritise High-Risk Groups:** Develop a tiered system that prioritises parents of young children, particularly those with infants and toddlers, for ADHD assessment and treatment.
3. **Enhance Accessibility:** Expand telehealth services and digital diagnostic tools to reach underserved areas, ensuring equitable access to care across all regions.
4. **Implement Parent Coaching Programs:** Introduce structured coaching programs tailored to parents with ADHD, providing practical strategies for managing symptoms and improving caregiving practices.
5. **Foster Collaboration:** Integrate ADHD services with paediatric and mental health care, creating multidisciplinary support networks for families.
6. **Raise Public Awareness:** Launch campaigns to reduce stigma and promote early self-referral for parents who suspect they may have ADHD.
7. **Support Single Parents:** Ensure that single parents with ADHD receive targeted support, including access to resources, peer networks, and tailored interventions.

By addressing these recommendations, the NHS ADHD Task Force and broader healthcare systems can create a more supportive environment for families affected by ADHD. Effective treatment for caregivers not only transforms their lives but also fosters healthier, more resilient outcomes for their children, ultimately benefiting society as a whole. The evidence is clear: prioritising ADHD treatment for parents is an investment in the next generation's emotional, cognitive, and social well-being.

Key Learning Points

1. **Infant Development and Maternal Care:** The first three years of life are critical for emotional bonding, cognitive growth, and social development, heavily influenced by consistent and responsive caregiving.
2. **Impact of Untreated ADHD on Caregiving:** Mothers with untreated ADHD may struggle with impulsivity, inattention, and emotional dysregulation, leading to inconsistent caregiving and risks for insecure attachment in infants.
3. **Cognitive and Emotional Consequences for Infants:** Disruptions in caregiving can result in delayed emotional regulation, impaired cognitive growth, and behavioural challenges in children.
4. **Critical Period of Brain Development:** The first three years are marked by peak brain plasticity and neural development, making consistent and responsive caregiving essential.
5. **Gender and Primary Caregiving:** Effective caregiving, regardless of gender, depends on the consistency and responsiveness of the caregiver, emphasizing the importance of treating ADHD in any primary caregiver.
6. **Barriers to ADHD Diagnosis and Treatment in the UK:** Long waiting times, regional disparities, and underfunded ADHD services create significant challenges for mothers needing timely intervention.
7. **Role of NHS ADHD Task Force:** While initiatives like telehealth and digital diagnostic tools have shown progress, funding and workforce limitations hinder comprehensive care delivery.
8. **Recommendations for Systemic Reform:**
 - Increased funding for ADHD services.
 - Prioritization of parents with young children for assessments and treatment.
 - Expanded accessibility through telehealth and digital diagnostic tools.
 - Tailored parent coaching programs and multidisciplinary support networks.
 - Public awareness campaigns to reduce stigma and encourage early self-referral.

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