WHAT WORKS TO ENHANCE THE EFFECTIVENESS OF THE HEALTHY CHILD PROGRAMME: AN EVIDENCE UPDATE

SUMMARY

JUNE 2018

Kirsten Asmussen and Lucy Brims

ACKNOWLEDGMENTS

We are grateful to Public Health England for supporting this research and their thoughtful guidance throughout the duration of this project.

Summary

This is the summary of our report, *What works to enhance the effectiveness of the Healthy Child Programme: An evidence update*. The full-length report is available at: **http://www.eif.org.uk/publication/what-works-to-enhance-the-effectiveness-of-the-healthy-child-programme-an-evidence-update**

Early Intervention Foundation
10 Salamanca Place
London SE1 7HB

W: www.EIF.org.uk
E: info@eif.org.uk
T: @TheEIFoundation
P: +44 (0)20 3542 2481

Summary

The Healthy Child Programme 0–5

The Healthy Child Programme 0–5 (HCP 0–5) is an evidence-based framework for the delivery of public health services to families with a child between conception and age 5. This is a universal prevention and early intervention programme and forms an integral part of Public Health England's priority to ensure:

- every woman experiences a healthy pregnancy
- every child is ready to learn by the age of 2
- every child is ready for school by the age of 5
- a reduction in child obesity and inequalities in oral health.

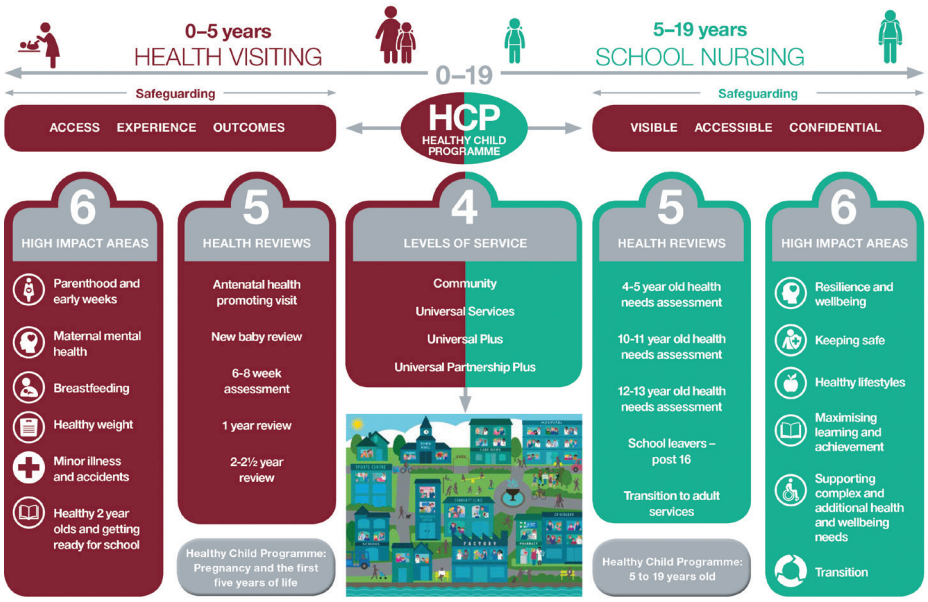
The HCP 0–5 comprises child health promotion, child health surveillance, screening, immunisations, child development reviews, prevention and early intervention to improve outcomes for children and reduce inequalities. The universal reach of HCP 0–5 ensures that all children are offered five mandated health reviews by the health visiting service, which provides an invaluable opportunity to both support all families to give their children the best start, and identify children and families who are most at risk of poor outcomes. The health visiting service supports parents to identify the most appropriate level of support for their individual needs. Health visitors provide leadership for delivery of the HCP 0–5 and work with partners to deliver a comprehensive programme of support.

Over the past five years the health visiting service has undergone rapid growth and transformation, setting out the 4-5-6 model for health visiting[1,2] which identifies **4** levels of health visiting support, coordinated through **5** universal health visiting reviews, which emphasise **6** high impact areas (see figure S1).

1 PHE (2016). *Best start in life and beyond: Improving public health outcomes for children, young people and families*. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/554499/Service_specification_0-19_commissioning_guide_1.pdf

2 PHE (2014). Supporting public health: children, young people and families. Available at: https://www.gov.uk/government/publications/commissioning-of-public-health-services-for-children

FIGURE S1: THE 4-5-6 MODEL OF HEALTH VISITING SUPPORT



Source: PHE

An evidence update

When HCP 0–5 was first introduced in 2009[3] it was based on the best available evidence summarised in the fourth edition of *Health for All Children*[4] and supplemented with guidance from the National Institute for Health and Clinical Excellence. This report refreshes the 2009 evidence by consolidating key messages from two recently completed evidence reviews:

- **The Rapid Review to Update Evidence for the Healthy Child Programme 0–5,** which summarised key evidence from systematic literature reviews conducted between 2008 and 2014 involving activities aimed at supporting young children's health and development in the early years.[5]
- **Foundations for Life: What works to support parent–child interaction in the early years**, which assessed the strength of evidence underpinning 75 interventions developed to support children's attachment security, behavioural self-regulation and cognitive development between conception and the age of 5.[6]

The most robust messages from both reviews have been further updated with a systematic review of evidence published since 2014.

Findings from the two reviews and current update are prioritised in terms of activities identified as having **good evidence** of improving child and parent outcomes.

3 Shribman, S., & Billingham, K. (2009). *Healthy Child Programme: Pregnancy and the first five years of life*. Department of Health.

4 Hall, D. M., & Elliman, D. (2006). *Health for all children: revised fourth edition*. Oxford University Press.

5 Axford, N., Barlow, J., Coad, J., Schrader-McMillan, A., Bjornstad, G., Berry, V., Wrigley, Z., Goodwin, A., Ohlson, C., Sonthalia, S., Toft, A., Whybra, L. & Wilkinson, T. (2015) *Rapid Review to Update Evidence for the Healthy Child Programme 0–5*. London: Public Health England. https://www.gov.uk/government/publications/healthy-child-programme-rapid-review-to-update-evidence

6 Asmussen, K., Feinstein, L., Martin, J., & Chowdry, H. (2016). *Foundations for life: What works to support parent child interaction in the early years*. Early Intervention Foundation. Available at: http://www.eif.org.uk/publication/foundations-for-life-what-works-to-support-parent-child-interaction-in-the-early-years/

This means that the intervention or activity has evidence from at least one rigorously conducted impact evaluation which permits an attribution of causality, in keeping with the Early Intervention Foundation's level 3 and 4 evidence criteria.[7] Although this methodology prioritises evidence from manualised interventions over other common health visiting practices, we believe this information is nevertheless useful for informing health visiting and midwifery more generally.

We additionally describe interventions which have been found through robust evaluation to not provide benefits for parents or children. In these instances, we describe the intervention as having **no effect**.

Activities which have not been robustly evaluated are described as having **weak evidence**.

Key messages are organised in terms of children's age and family need within the following priority areas:

Conception to birth

- transition to parenthood
- smoking cessation
- maternal mental health and harmful drug and alcohol use
- intimate partner violence.

Birth to 12 months

- low-birthweight infants
- breastfeeding
- exposure to secondhand smoke
- Sudden Infant Death Syndrome (SIDS)
- sleep training
- attachment security
- early language
- maternal mental health
- preventing unintentional injury
- child abuse and neglect.

We also describe interventions in terms of the following four levels of need.[8]

- **Universal:** Services/interventions which can be made available to all families, including immunisations, developmental reviews and antenatal care.
- **Targeted selective:** Services that target or 'select' families with characteristics that place them at greater risk of experiencing problems. These characteristics include economic hardship, single parenthood, young parents and ethnic minorities. Examples of targeted selective support include advice provided to teenage mothers or childcare that is available to families living in disadvantaged circumstances.
- **Targeted indicated:** Services/interventions for families with a child or parent with a pre-identified issue or diagnosed problem requiring more intensive support. Examples of services/interventions falling into this category include support for antenatal depression and parenting advice for families with a pre-identifed issue with their child's development.

7 For more on EIF's standards of evidence, see the annex to this report, or: http://guidebook.eif.org.uk/eif-evidence-standards

8 Hardiker, P., Exton, K., & Barker, M. (1991). The social policy contexts of prevention in child care. *British Journal of Social Work*, 341–359.

- **Specialist:** Refers to interventions developed for high-need families, where there is an ongoing problem (such as ongoing illness or special needs) or serious child protection concerns.

Findings: conception to birth

Antenatal development is a natural, but complex process. Mothers support this process by eating nutritious food, maintaining a healthy weight and abstaining from nicotine, alcohol and drugs. Mothers also support their unborn child's development by avoiding high levels of stress. The primary aim of most antenatal interventions is to therefore help mothers take care of themselves and prepare for the transition to parenthood.

Transition to parenthood

Managing the transition to parenthood is an early years high impact area for the Healthy Child Programme. Interventions that aim to support this process typically include activities which give parents information about the childbirth experience, promote breastfeeding and provide strategies for managing the weeks following childbirth.

The extent to which childbirth preparation classes improve birth-related outcomes (reduced pain, fewer birth complications) remains unknown, as few programmes have been rigorously evaluated. However, **there is good evidence showing that the Family Foundations programme reduces parental stress and child attachment-related behaviours when offered to couples expecting their first child.** Family Foundations is a 10-week universal intervention which teaches couples strategies for supporting the parental relationship during the transition to parenthood and establishing positive family routines. Family Foundations has evidence from two randomised controlled trials demonstrating reductions in couple conflict during the child's first year, improved child attachment behaviours at age 1, improved behaviour at age 3 and improved behaviour at school at age 7.

Smoking cessation

Smoking during pregnancy introduces a variety of toxins to the intrauterine environment that are consistently associated with adverse birth outcomes. It is estimated that 10.5% of all women smoke throughout pregnancy, potentially exposing their infants to harmful levels of these toxins. Harmful levels of cigarette toxins in the womb are strongly associated with a variety of adverse child outcomes, including low birthweight and miscarriage.

The aim of most smoking interventions is to help mothers stop their consumption of cigarette smoke and nicotine. There is now good evidence to suggest that various forms of counselling significantly reduce the number of cigarettes smoked per day, although **incentive-based programmes have the strongest evidence of encouraging smoking abstinence during pregnancy.** Incentives are typically offered in the form of vouchers which mothers can use to purchase retail goods. While financial incentives are often more expensive than smoking advice or counselling, economic studies conducted in the UK suggest that reductions in low-birthweight babies and other adverse child outcomes substantially offset their upfront costs.

Maternal mental health and harmful drug and alcohol use

Maternal mental health problems are consistently linked to higher levels of cortisol in the womb and an increased risk of poor birth outcomes. Mothers experience mental health problems at rates comparable to general female population, ranging from 15 to 25%.

Interventions aimed at preventing the onset of mental health problems during pregnancy and the postnatal period have been found to have no effect. However, several recent systematic reviews have confirmed that **universal screening for mental health problems during pregnancy is associated with reduced symptoms of depression and anxiety in expectant mothers**. In particular, studies show that universal mental health screening reduces symptoms of depression in mothers who are not clinically depressed in the absence of any further provision, as well as in clinically depressed mothers when leading to additional effective treatment.

There is good evidence showing that mental health screening is beneficial to mothers diagnosed with mental health problems when combined with evidence-based treatments. Examples of evidence-based treatments include cognitive behavioural therapy (CBT) for the treatment of depression and anxiety, and pharmaceuticals shown to pose minimal harm to the unborn infant for the treatment of severe post-traumatic stress disorder (PTSD), borderline-personality disorder (BPD) and various psychoses, including schizophrenia.

The strength of evidence underpinning various treatments for harmful levels of drug and alcohol use during pregnancy is weak. Commonly used treatments found not to be effective in the general population include brief interventions providing advice to adults engaging in harmful drinking or drug use. However, the efficacy of these interventions during pregnancy has not been explicitly tested.

There is good evidence to suggest that methadone treatment programmes improve birth outcomes among children born to mothers with a heroin addiction. Recent studies have also found that buprenorphine is a safe alternative to methadone for managing opioid addictions during pregnancy.

Intimate partner violence

Pregnancy is a period of particular risk for intimate partner violence (IPV), occurring in approximately one-sixth of all pregnancies. IPV substantially increases mothers' experiences of stress and trauma, resulting in increased levels of cortisol in the womb which may contribute to a variety of adverse childbirth outcomes, including maternal and infant death.

There is now good evidence to support the use of a variety of screening practices for the identification of IPV during the perinatal period. This review has identified two activities with good evidence of reducing IPV in pregnant mothers:

- The Family Nurse Partnership (FNP) programme provides home visiting support for first-time teenage mothers, starting during the mother's pregnancy and lasting until the child's second birthday. FNP has good evidence of reducing maternal reports of IPV, as well as a variety of other important mother and child outcomes. While a recently completed UK trial did not replicate these findings, **FNP remains an evidence-based option for reducing IPV among first-time teenage mothers.**
- Psychosocial support integrated into routine antenatal care has evidence of reducing revictimisation rates among women reporting IPV during their pregnancies. This support provides mothers with information about partner behaviours considered to be abusive, as well as strategies for developing a safety plan. Mothers are also taught CBT techniques for managing symptoms of trauma and depression and are offered smoking cessation support when necessary. Psychosocial support integrated into routine antenatal care has good evidence from one randomised controlled trial (RCT) observing significant reductions in repeat victimisations, symptoms of depression, rates of smoking, and adverse birth outcomes among mothers receiving the intervention in comparison to those who did not.

Findings: birth to 12 months

Infants develop at a remarkable pace during the first 12 months of life. Parents support this process by meeting their infant's physical needs of food and warmth and by creating an environment that is safe and predictable. While the majority of parents do this naturally, a significant minority of parents struggle to understand their infant's needs and respond appropriately. Circumstances which negatively impact parenting behaviours include ongoing economic hardship, high levels of parental conflict, parental mental health problems and harmful drug and alcohol use. Interventions offered during the child's first year therefore often target these vulnerabilities specifically.

Low-birthweight infants

Approximately 7% of babies born each year are considered to have a low birthweight (that is, less than 5.5 pounds or 2.5 kilograms). Causes of low birthweight include multiple births, a preterm birth, smoking and birth-related complications. Low birthweight is also associated with a variety of adverse outcomes throughout children's development, including poor physical health and cognitive delays.

Low-birthweight infants often require time in an incubator to support the development of their vital organs. However, incubators are inadequate for recreating all aspects of the mother's womb, including the sensory and auditory input necessary for early neurological development. Incubators also restrict the amount of time parents spend with their infant, placing stress on the parent–infant relationship. Interventions therefore often aim to improve the quality of physical contact parents have with their infants, as well as increase their understanding and sensitivity towards their infant's cues.

The following interventions have good evidence of improving the negative outcomes frequently associated with low birthweight:

- Kangaroo Mother Care (KMC), increases the skin-to-skin contact between the mother and infant as a way of replicating aspects of the womb environment. KMC involves placing the premature baby upright on his or her mother's chest for at least six hours per day. **Kangaroo Mother Care has good evidence of increasing breastfeeding rates, as well as improving parental sensitivity and increasing children's attachment-related behaviours.** Much of this evidence comes from developing countries, however, meaning it may not be applicable to the UK.
- **Infant massage has good evidence of improving physical outcomes in low-birthweight babies, as well as decreasing parental stress and increasing sensitivity. It is important to note, however, that these benefits have not been replicated with healthy, normal-weight infants.**
- There is good evidence to support the use of 'cue-based' training which aims to help parents understand their infant's feeding cues and maintain a quiet and alert state. Much of cue-based training takes place while the infant is still receiving incubator care in the hospital. **The H-HOPE (Hospital to Home Transition-Optimizing Premature Infant's Environment) and the Mother Infant Transaction Programme (MITP) are both examples of cue-based training programmes with good evidence of improving parental sensitivity and physical outcomes in low-birthweight infants.**

Breastfeeding

There is now good evidence showing that breast milk protects infants from a wide variety of infectious diseases and reduces the risk of breast and ovarian cancer in mothers. There is also good evidence to suggest that the likelihood of these benefits increases with the duration and exclusivity of breastfeeding. The World Health Organization (WHO) therefore recommends that infants be exclusively breastfed for the first six months of life and continue to be breastfed alongside solid food until the child's second birthday.

Rates of breastfeeding in the UK are low in comparison to other developed countries. While rates of initiation after childbirth are high (around 80%), they drop off considerably during the weeks that follow. Recent UK statistics suggest that only 43.2% of all mothers are still nursing at eight weeks following their infants' birth. The majority of breastfeeding promotion activities therefore aim to increase the exclusivity and duration of breastfeeding during the child's first year.

Individual breastfeeding advice, provided to mothers over the phone and in person in the weeks before and after childbirth has the best evidence of increasing breastfeeding initiation and duration rates. Less is known about the extent to which such activities also improve exclusivity, however.

Preventing infant exposure to secondhand smoke

Exposure to secondhand smoke (SHS) during infancy is significantly associated with a variety of negative child health outcomes, including Sudden Infant Death Syndrome (SIDS), increased respiratory tract infections and asthma. Infants and children can also be negatively affected by 'thirdhand' smoke, which is present in the toxic residue from cigarette smoke that exists on furniture and floors.

It is estimated that at least 18% of all infants are exposed to secondhand smoke by the time they are three months old. The majority of these children live in economically disadvantaged households, where family members are more likely to smoke and smoke heavily. Interventions developed to reduce infants' exposure to secondhand smoke include strategies to prevent smoking relapse among low-income mothers who abstained from smoking during their pregnancies, as well as activities aimed at reducing levels of secondhand smoke in homes with young children.

While there is some evidence to support the use of telephone counselling to prevent smoking relapse, studies show that such interventions are not particularly effective when offered to mothers in the weeks and months following childbirth. However, **there is good evidence to support the use of interventions which make use of household air quality measurements to help heavy smokers reduce the amount of secondhand smoke present in their homes.**

Sudden Infant Death Syndrome

Sudden Infant Death Syndrome (SIDS) is the sudden, unexplained death of an infant (12 months or younger) during sleep. While the reasons for SIDS remain unknown, there is good evidence to suggest it is associated with prone sleeping positions. Other risks associated with SIDS include low birthweight, exposure to cigarette smoke, increased heating and bed clothing due to winter weather, and co-sleeping with the caregiver on a bed or sofa. Current estimates suggest that SIDS-related infant deaths occur at a rate of 0.3 per 1,000 live births. **There is good evidence to support the advice currently provided to new parents on placing children on their backs when putting them to sleep.**

Sleep training

Sleep difficulties during infancy have been linked to a wide range of child problems, including behavioural difficulties and an increased risk of child physical illness. Parents also report higher levels of stress and depression when their infants are not able to sleep through the night.

Sleep advice provided during the first year is commonly referred to as 'behavioural sleep training.' Such advice is typically provided by a health professional or through a pamphlet. This advice may include information about one or more of the following strategies for helping infants fall and stay asleep:

- **Graduated extinction** – also known as 'controlled crying'. Parents check in with the infant to let him/her know they are there, but otherwise do not respond to the crying or soothe the child to sleep.
- **Bedtime fading/positive routines** – examples include 'bath, book and bed' which help children settle down, so they fall asleep on their own when it is time to go to bed.

There is good evidence to support the use of graduated extinction and bedtime fading advice with parents who are having sleep difficulties with an infant who is four months or older. Parents acting on this advice report significant reductions in the time required for their infant to fall asleep, fewer night wakings and increases in the amount of time infants sleep. Parents also report less stress and fewer symptoms of depression once infants sleep through the night. Studies also find that extinction practices do not increase the likelihood of any adverse consequences, including reductions in breastfeeding and attachment security or increases in SIDS-related deaths.

Attachment security

Attachment security refers to the positive expectations young children develop about themselves and others. Attachment security develops as a result of positive and predictable interactions with the caregiver occurring on a regular basis during the child's first year. A secure attachment during infancy is significantly associated with positive social and emotional development throughout the life-course, whereas an insecure attachment increases the risk of later mental health problems.

Parents foster an infant's attachment security by responding sensitively to their child's needs. The majority of parents are able to do this naturally, without any additional support or training from others. Studies suggest that between two-thirds and three-quarters of all infants are securely attached to their parents by the age of 1.

A significant minority of parents struggle to respond sensitively to their child's needs, however, contributing to an insecure or disorganised attachment relationship. A disorganised attachment is consistently associated with insensitive and inappropriate parenting, including child maltreatment. Circumstances that limit parents' ability to engage sensitively and positively with their child include high levels of ongoing stress, mental health difficulties and attachment insecurity in their own childhoods. Attachment-based interventions therefore typically target parents experiencing difficulties which may limit their ability to care for their children in an appropriate and sensitive way.

A variety of interventions have good evidence of improving the sensitivity of highly vulnerable parents. These include various forms of video-feedback and short-term sensitivity training. However, relatively few attachment-based interventions have specific evidence of improving any child outcomes.

Attachment-based interventions identified as having good evidence of improving child outcomes include:

- **The Family Nurse Partnership programme:** FNP is a two-and-a-half-year home visiting programme offered to first-time single mothers. It has good evidence from studies conducted in the United States of improving attachment security amongst infants who are at risk of child maltreatment. It should be noted, however, that these benefits have not been replicated in a recent UK RCT.
- **Infant–Parent Psychotherapy (IPP; Lieberman model):** A psychodynamic therapeutic intervention aimed at helping mothers address issues in their past which may be interfering with their ability to respond sensitively to their child. IPP has good evidence of improving infant attachment security and rates of child maltreatment. IPP also has evidence of reducing symptoms of trauma in mothers and children who have experienced domestic abuse.
- **Child First:** A year-long home visiting intervention offered to highly vulnerable families where there is a serious risk of attachment-related problems. Families receive IPP for a period of 12 months alongside ongoing keyworker support and increased community engagement. Child First has evidence of supporting children's language development and reducing referrals to child protection services.

Early language

Most children can say one or two words by the time of their first birthday. This is a result of a natural but complex process which permits infants to discriminate sounds, understand them as having specific meaning, and then replicate them to communicate ideas and feelings with others. Parents support this process through daily language 'scaffolding' in the form of highly exaggerated infant-directed speech that is responsive to infant cues. The quality of this speech is highly associated with the child's mother's education and income. Although income-related differences in children's language development have not been observed during the child's first year, they are already evident by 18 months. For this reason, interventions addressing children's early language learning often target low-income families.

There is good evidence that intensive home visiting interventions support children's language development in the early years. These programmes include Family Nurse Partnership, which has UK evidence of improving child language outcomes, as well as Child First and Parents as First Teachers.

Maternal mental health

Supporting maternal mental health is an early years high impact area. There is good evidence to suggest that depressive symptoms are more prevalent during the weeks following childbirth than at any other point in women's lives. Some studies suggest that maternal mental health problems have the potential to interfere with mothers' ability to respond sensitively to their child's needs. There is therefore a strong need for ongoing maternal mental health screening throughout children's early development.

While there is consistent evidence to suggest that maternal mental health problems are difficult to prevent, there is good evidence that mental health problems can be successfully treated once identified.

Interventions known to improve mental health outcomes in adults include:

- antidepressants and other pharmacological treatments
- CBT
- interpersonal therapy
- psychodynamic therapy
- non-directive counselling.

Of these approaches, **CBT and psychodynamic therapy have the strongest evidence of reducing symptoms of depression and anxiety during the postpartum period.** However, the extent to which CBT and other interventions also improve child outcomes as not been explicitly tested.

Preventing unintentional injuries

Injuries are a primary reason for emergency department visits for children under the age of 4 and a leading cause of preventable death in infancy. The majority of injuries occurring in infancy take place in the home and are preventable. Factors contributing to unintentional injuries include inadequate supervision and increased exposure to various household risks.

Interventions aimed at reducing unintentional and preventable injuries typically provide parents with advice on how to improve supervision and safety within the home. **There is good evidence showing that home safety equipment schemes increase parents' knowledge of home safety**, but the extent to which they prevent child injuries from occurring in the first place has not been explicitly tested.

Reducing the risk of child maltreatment

In 2015/2016, 4,020 unborn children and 11,860 infants were identified as being in need because of concerns involving child abuse and neglect. An additional 1,020 unborn children and 5,080 infants were subject to a child protection plan. Studies have also found that infants are more likely to die as a result of child maltreatment, representing a disproportionate number (40% or more) of serious case reviews.

Studies additionally show that over half of child protection cases involving an unborn child or infant are based on concerns related to child neglect. Neglect in infancy often occurs as a result of harmful maternal drug or alcohol use, which can contribute to children becoming unnecessarily ill, not developing as expected, experiencing increased prevalence of unintentional injuries, or dying because of unsafe sleeping arrangements. The next most prevalent category of child maltreatment during pregnancy and infancy is physical abuse, involving approximately 12% of all cases. Physical abuse in infancy often involves parents deliberately harming their infant by hitting or shaking them.

Studies consistently show that children are at a greater risk of maltreatment when:

- one or both parents have a mental health problem
- there is ongoing interparental violence in the home
- one or both parents misuse drugs or alcohol.

Other factors known to increase the likelihood of child maltreatment include high levels of economic disadvantage, a low birthweight or premature birth, higher numbers of children per household, low levels of social support or single parenthood and a history of parental maltreatment in childhood. Interventions aimed at preventing or reducing child maltreatment therefore typically target families experiencing one or more of these adversities.

Several recently completed systematic reviews have confirmed that **home visiting in highly vulnerable families has the best evidence of reducing child maltreatment during infancy**. Interventions with specific evidence of preventing or reducing child maltreatment include:

- Family Nurse Partnership, which has consistent evidence of preventing child maltreatment in the United States and the Netherlands, although such reductions have not been confirmed in the UK
- Child First
- Infant–Parent Psychotherapy.

Child First and Infant–Parent Psychotherapy additionally have evidence of reducing child maltreatment when one or both parents have a mental health problem or there are issues involving intimate partner violence. However, less is known about the effectiveness of interventions targeting harmful levels of alcohol and drug use. While motivational interviewing, Family Drug and Alcohol Courts, and the Parents Under Pressure programme all show promise in improving parent outcomes, the extent to which children also benefit has not yet been rigorously tested.

Activities found not to work

This review also identified a number of common practices which have been found not to be effective through rigorously conducted evaluations or systematic reviews. These activities include:

- **Infant massage, when offered universally to mothers and healthy, full-term infants, has been found through systematic reviews to have no effect.** While mothers often enjoy attending infant massage classes, improvements in maternal sensitivity and other child benefits have not been consistently observed. In addition, there is evidence to suggest that infant massage may result in adverse child outcomes when offered to women at risk of maltreating their children.
- **Parent management training (PMT) offered during the child's first year has been found to have no effect.** While there is good evidence showing that PMT is highly effective when made available to parents experiencing difficulties in the behaviour of a child over the age of 2, there is no evidence to suggest that it effectively prevents behavioural problems from occurring when offered during infancy or pregnancy.
- **Book gifting and other light-touch interventions aimed at supporting children's language development have been found to have no effect in improving children's language or changing parental behaviours.**
- **Activities aimed at preventing maternal mental health problems**, including depression.
- **Brief interventions aimed at reducing harmful drinking and drug misuse have been found to have no effect in changing the drinking behaviours in adults in the general population.** While such interventions originally showed promise with substance misusing adults, several recent trials have observed few lasting benefits, including relapse prevention. The efficacy of such programmes with pregnant mothers has not been explicitly tested, however.

A summary of the interventions and activities found to work and not work is provided in table S1.

TABLE S1: WHAT WORKS AND WHAT DOES NOT – EVIDENCE-BASED ACTIVITIES AND INTERVENTIONS FOR PARENTS AND CHILDREN DURING THE EARLY YEARS

Programmes in **green** are evidence-based; activities in **red** have strong evidence suggesting no effect. Interventions are only included if there is robust evidence (at least EIF level 3) supporting their effectiveness or lack thereof.

	Conception to birth	0 to 12 months
Screening	Smoking Maternal mental health Drug and alcohol misuse IPV	Continued maternal mental health screening
Universal	Couple support embedded in preparation for childbirth (**Family Foundations**)	Specialist-led lactation advice Advice on infant sleeping positions (birth) **Infant massage** **Parent training aimed at preventing child behavioural problems** **Book gifting**
Targeted selective	Home visiting for first-time teen mothers **(Family Nurse Partnership)** **Interventions that aim to prevent maternal mental health problems from occurring**	Home visiting support to promote children's learning in socially disadvantaged families (**Family Nurse Partnership; Parents as First Teachers**) The installation of gates and other safety equipment for economically disadvantaged families
Targeted indicated	Incentive-based smoking interventions Empowerment-based counselling for women experiencing IPV CBT for mothers experiencing depression or anxiety	Kangaroo Mother Care for preterm infants Cue recognition training for preterm infants Infant massage for preterm infants Behavioural sleep training advice (8 weeks) Multicomponent interventions to reduce children's exposure to secondhand smoke Antidepressants, cognitive behavioural therapy and other talking therapies for mothers identified with maternal depression **Infant–Parent Psychotherapy (Lieberman model)** for infant/mother dyads at risk of child maltreatment, including concerns involving maternal mental health and intimate partner violence **Child First** for at-risk families living in socially disadvantaged circumstances, where there are concerns involving child maltreatment, intimate partner violence or maternal mental health issues
Specialist	**Brief interventions for suspected drug and alcohol misuse** Detoxification	**Brief interventions for suspected drug and alcohol misuse** Detoxification

Source: EIF

Summary of conclusions and implications for practice

1: The evidence base is growing

Knowledge of what does and does not work continues to grow at a rapid pace. Our update to the Foundations for Life and HCP Rapid Review confirmed that there is good evidence underpinning many of the activities already delivered through the Healthy Child Programme. For example, studies have now verified that a variety of common screening activities have good evidence of accurately identifying parental mental health problems and effectively monitoring progress. These screening activities also have good evidence of improving parent and child outcomes when evidence-based services are offered as a result.

Our review has also identified a variety of evidence-based interventions that can be offered at the universal, targeted selective and targeted indicated level to meet a wide range of family needs. While notable gaps in the evidence base remain, there are several areas of practice that could clearly be enhanced by evidence-based activities.

Our knowledge of what does not work is increasing, as well. For example, there is now consistent evidence to suggest that parent management training offered at the universal level during infancy does not measurably improve parent or child outcomes in the short run, nor prevent behavioural problems from occurring as children grow older. While there is good evidence to support the use of parent management training interventions for children over the age of 2, their impact for parents and babies appears to be minimal.

2: Not all problems are preventable

Prevention of modifiable risks and promotion of positive protective factors is a vital role of health visiting universal services. However, not all problems are preventable through maternity and health visiting services. For example, postnatal depression is a condition that is difficult to prevent, although there are a variety of interventions with good evidence of treating symptoms of depression once they occur. Resources should therefore target effective interventions to identify, assess and mitigate problems as well as new research to determine the efficacy of new interventions.

3: There are few magic bullets or quick wins

The majority of effective interventions identified in this review are relatively intensive – that is, taking place for three months or longer through multiple family visits. This is because studies consistently suggest that time is often necessary for families to develop a positive relationship with professionals, to appreciate that aspects of their circumstances may need to change and to develop skills to make that change happen. For example, many of the smoking cessation interventions identified in this review are more intensive than the advice traditionally made available. While these interventions are typically more expensive than care as usual, their costs need to be considered against increased benefits for parents and children. In the case of smoking cessation, these benefits include improved birth outcomes, reduced respiratory problems, and reduced rates of adult and child mortality.

It is worth noting, however, that this report did identify a number ‘quick wins’: relatively short interventions with evidence of improving child and parent outcomes in the short and long term for large sections of the general population.

These interventions include:

- advice about infant sleeping positions that have dramatically reduced SIDS-related deaths over the past 20 years
- parental support offered to couples expecting their first child also appears to measurably improve parents' ability to establish positive family routines and reduce conflict around childcare issues
- sleep training interventions offered to families experiencing problems with their infant's sleep at four months or older
- individualised lactation support offered to mothers in the weeks just before and after child birth.

4: The Healthy Child Programme is a good delivery mechanism for many of the interventions described in this report

The vast majority of interventions and practices identified in this report were developed specifically to be delivered or coordinated by health professionals, including midwives, nurses and health visitors. With minimal additional training in the programme delivery models, it is highly likely that the majority of interventions could be successfully delivered as part of the Healthy Child Programme. This includes all of the screening activities described in this report, as well as many of the universal and targeted selective interventions. A wide variety of targeted indicated interventions could also be delivered by qualified midwives, nurses and health visitors.

5: Good systems are required to identify need and refer families on to additional support as and when needed

While a wide variety of the interventions described in this report can be successfully delivered through routine midwifery and health visiting care, some require delivery by specialist teams. These teams might include lactation specialists, smoking cessation teams and health visiting teams trained and supervised to provide intensive home visiting to highly vulnerable families. This means that some interventions may require the set-up and supervision of new specialist teams in order to maximise their effectiveness. Good referral systems may also be required to coordinate services across specialist teams.

Some of the more intensive interventions also require good referral systems between midwifery, health visiting, adult mental health and social work teams in order to be successful. This is particularly true of interventions targeting highly vulnerable families, including those where mental health problems, intimate partner violence and substance misuse are clearly an issue.

6: Evidence of effectiveness is not a replacement for ongoing evaluation

The fact that an intervention has evidence from a rigorous evaluation conducted at one time and place does not mean that it will be effective again. While the evidence underpinning the interventions identified in this report increases the likelihood of improved child and parent outcomes, it is not a guarantee. The evidence described in this report is therefore not a replacement for good monitoring and evaluation systems as interventions are set up and delivered.

7: Evidence that an intervention is effective for parents does not necessarily mean that children will also benefit

Many of the interventions and activities identified in this report have evidence of improving outcomes for parents, but not their children. In some cases, this is

because child outcomes have not been measured and in other cases, rigorous studies have failed to verify child improvements. It is therefore not sufficient to assume that children will automatically benefit from interventions that only have evidence of meeting parents' needs.

While evidence of improved parent outcomes is a good starting point, given the aims of HCP 0–5 further testing is required to verify child benefits. This caveat is particularly true of interventions targeting maternal mental health. It is now clear that a wide range of interventions have good evidence of reducing symptoms of depression and anxiety in the general population, as well as in mothers during the postnatal period. The extent to which their children also benefit remains unknown, however. We view this to be a significant gap in the evidence base, especially given the significant impact maternal mental health has on children's development and wellbeing.

8: There is a lack of evidence about when and how to intervene when parents misuse drugs and alcohol

Parental drug and alcohol misuse and dependency significantly impairs parents' ability to understand their young child's needs and provide appropriate levels of supervision. It is highly associated with a variety of negative child outcomes and is a primary reason for child protection referrals during the antenatal period and first 12 months of life. Parental substance misuse is also difficult to detect and can be resistant to treatment.

The Rapid Review and this current update failed to identify any interventions with robust evidence of improving outcomes for drug and alcohol misusing parents and their infants. This is because good-quality studies are generally lacking and those that exist have failed to verify meaningful benefits for the parent or child.[9,10] Although a number of effective drug and alcohol treatments exist for the general adult population, improvement is often gradual and relapse is common. In addition, the extent to which these interventions improve parenting behaviours remains largely unknown.

We believe that the lack of evidence involving interventions for parents who misuse drugs and alcohol represents a serious gap in the evidence base. More high-quality research is therefore urgently required to understand the extent to which substance misuse interventions improve parenting behaviours and child outcomes.

9 Brandon, A. R. (2014). Psychosocial interventions for substance use during pregnancy. *The Journal of Perinatal & Neonatal Nursing*, *28*(3), 169–177.

10 Lui, S., Terplan, M., & Smith, E. J. (2008). Psychosocial interventions for women enrolled in alcohol treatment during pregnancy. *The Cochrane Library*.