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Health Education England

The engagement of Allied Health Professionals and Psychologists in the maternity care pathway

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Executive summary

This comprehensive guide about the contribution that Allied Health Professionals and psychologists make to the maternity care pathway has been produced as a reference document.

This guide is designed to support health and care staff who have an interest in the planning, development and delivery of maternity services.

The professional groups included in this guide are:

- Arts therapists (Art, Drama, Music)
- Clinical psychologists
- Dietitians
- Health psychologists
- Occupational therapists
- Operating Department Practitioners
- Orthoptists
- Osteopaths
- Paramedics
- Physiotherapists
- Prosthetists and Orthotists
- Radiographers (Diagnostic)
- Sonographers
- Speech and language therapists

Currently there is limited awareness, understanding and visibility of the roles of AHPs and psychologists working across the maternity care pathway. These professional groups are seldom referred to in local maternity workforce plans with the exception of paramedics in the antenatal stage, operating department practitioners during the intrapartum phase and physiotherapists during post-natal care.

The scope of the work was to:

1. Understand and describe the current contribution that AHPs[a] and psychologists make to the five stages of the maternity care pathway which includes:

    I. pre- conception,
    II. antenatal,
    III. intrapartum,
    IV. post-partum
    V. first-year post birth.

    including identifying the different sectors and settings in which they deliver care.

2. Identify examples of good practice at various stages of the maternity care pathway.

The majority of these professions have some involvement in maternity care during the antenatal period, the post-partum stage and up to one year post birth. There is some involvement during pre-conception and less involvement the intrapartum phase.

The contribution of the professions to the different stages of the maternity care pathway have been gathered from the professional bodies that represent each of the AHPs and psychologists.

Good practice examples have been collected from individual professionals through requests made by each of the professional bodies to their members. These are included in the guide as:

1) Examples of services that the professions are involved in in the maternity care pathway which may or may not contain a patient case study.
2) Distinct patient case studies.

A summary of where each profession is involved across the maternity care pathway from pre-conception through to one year post birth including the sectors and settings AHPs and psychologists work in to deliver support to maternity services is highlighted below.

[a] AHPs include: Art, Music and Drama Therapists, Dietitians, Occupational Therapists, Operating department Practitioners, Orthoptists, Osteopaths, Podiatrists, Prosthetist and Orthotists, Radiographers (diagnostic, therapeutic and sonographers (Some midwives are sonographers as are professionals from other backgrounds)), Paramedics, Physiotherapists and Speech and Language Therapists.

A total of 39 good practice examples were collected from the following professions:
Art therapists, diagnostic radiographers, dietitians, music therapists, occupational therapists, osteopaths, paramedics, physiotherapists, psychologists, sonographers and speech and language therapists.

Allied Health Professions and psychologists' contributions at each stage of the maternity care pathway from conception to one year post birth

	Stages of the maternity care pathway				
Profession	**Pre-conception**	**Ante-natal**	**Intrapartum**	**Post-partum**	**One year post birth**
Art therapists	✓	✓	x	✓	✓
Dietitians	✓	✓	✓	✓	✓
Diagnostic radiographers	✓	✓	x	✓	✓
Drama therapists	x	x	x	✓	✓
Music therapists	x	✓	x	✓	✓
Occupational therapists	✓	✓	✓	✓	✓
Operating department practitioners	✓	✓	✓	✓	✓
Osteopaths	x	✓	x	✓	✓
Paramedics	x	✓	✓	✓	✓
Physiotherapists	✓	✓	x	✓	✓
Podiatrists	x	x	x	✓	✓
Prosthetists and orthotists	x	✓	x	✓	✓
Psychologists	✓	✓	x	✓	✓
Sonographers	✓	✓	x	✓	✓
Speech and language therapists	✓	✓	x	✓	✓

1.0 Introduction

The Allied Health Professional (AHP) Lead for Health Education England (HEE), working in partnership with the HEE National Programme Lead for Population Health, Prevention and Maternity expressed an interest to gain a high-level understanding of the roles and activity of the Allied Health Professions (AHPs) and psychologists in the maternity care pathway from pre-conception through to one year post birth for women and their babies They commissioned Allied Health Solutions to undertaken this work.

1.1 Scope of the work

In discussion with key stakeholders including the AHP Lead for HEE, the HEE National Programme Lead for Population Health, Prevention and Maternity, the maternity leads from the regional HEE offices and the Royal College of Midwives it was proposed that the scope of work would be to:

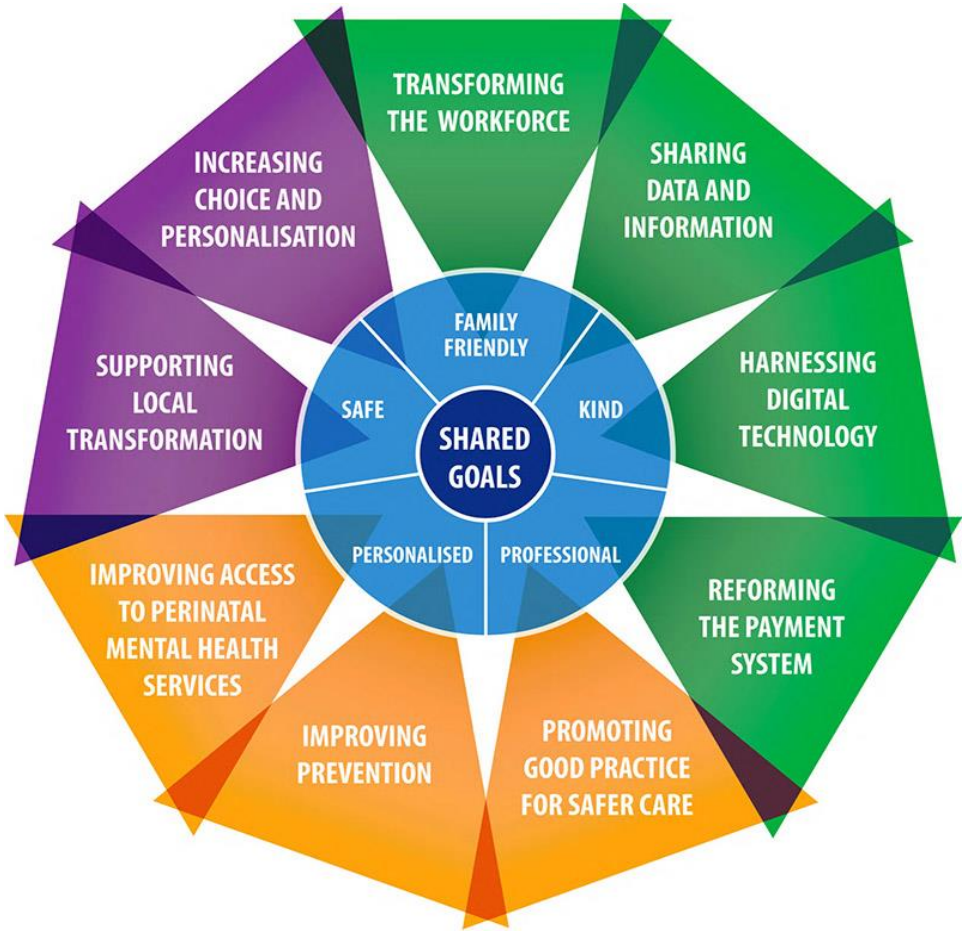
- Understand and describe the current contribution of AHPs[b], psychologists and allied health support workers at various stages of the maternity patient's journey which includes: pre-conception, antenatal, intrapartum, post-partum and the first-year post birth. This includes identifying the different sectors and settings in which they are delivering care.

- Identify examples of good practice through a combination of 1) Examples of services that the professions are involved in in the maternity care pathway and 2) Patient case studies at various stages of the maternity care pathway.

This work has been undertaken in parallel with HEE's Maternity Workforce Programme which is leading on the delivery of the Workforce Transformation Workstream (WS5) of the Maternity Transformation Programme[1]. The shared goals across the nine workstreams are that care is safe, family friendly, kind, personalised and professional (Figure 1).

[b] AHPs include: Art, Music and Drama Therapists, Dietitians, Occupational Therapists, Operating department Practitioners, Orthoptists, Osteopaths, Podiatrists, Prosthetists and Orthotists, Radiographers (diagnostic, therapeutic and sonographers (Some midwives are sonographers as are professionals from other backgrounds)), Paramedics, Physiotherapists and Speech and Language Therapists.

Figure 1 Overview of the NHS England maternity transformation programme



1.2 About this guide

This guide has been designed to support health and care staff who have an interest in the planning, development and delivery of maternity services. It includes maternity services across NHS providers as part of local maternity systems, NHS England maternity transformation early adoptors[3], NHS England maternity choice and personalisation pioneers[3], perinatal mental health teams, commissioners, workforce planners, third sector organisations, education and research institutions, as well as AHPs, psychologists and the professional bodies that represent them.

This guide aligns with HEE's mission to *'support the delivery of excellent healthcare and health improvement to the patients and public of England by ensuring that the workforce of today and tomorrow has the right numbers, skills, values and behaviours, at the right time and in the right place'[4].*

The purpose of the guide is to:

a) Raise the profile of the contribution of AHPs and psychologists across the maternity care pathway from pre-conception, ante-natal care, intrapartum, post-partum and up to one year post birth.
b) Inform local maternity workforce plans.
c) Support and inform the improvement of maternity services and the contribution that can be made by AHPs and psychologists at different points across the pathway.
d) Encourage and support AHPs and psychologists to recognise their role and potential roles in maternity services.
e) Share good practice examples to help describe and illustrate the contribution of AHPs and psychologists across the maternity care pathway.

1.3 About the AHPs

In the UK there are 11 Allied Health Professional groups with protected titles that are regulated by the Health and Care Professions Council (HCPC) and one allied health profession, osteopaths, regulated by the General Osteopathic Council. AHPs are collectively the third largest professional workforce in the NHS, with more than 170,000 AHPs in England. These AHP groups are supported by 14 different professional bodies.

The 14 regulated AHP professions in the UK are: arts therapists (art, drama, music), chiropodists/podiatrists, dietitians, occupational therapists, orthoptists, operating department practitioners, osteopaths, paramedics, physiotherapists, prosthetists and orthotists, radiographers (Diagnostic and Therapeutic) and speech and language therapists.

The following AHPs are included in this guide as they have a role in the maternity care pathway:

- Arts therapists (Art, Drama, Music)
- Dietitians
- Occupational therapists
- Operating Department Practitioners
- Orthoptists
- Osteopaths
- Paramedics
- Physiotherapists
- Prosthetists and Orthotists
- Radiographers (Diagnostic)
- Speech and language therapists

In addition, sonographers are included in this guide. The Royal College of Radiologists and the Society and College of Radiographers definition of a sonographer excludes General Medical Council (GMC) registered doctors but includes non-GMC registered doctors:

'A healthcare professional who undertakes and reports on diagnostic, screening or interventional ultrasound examinations. They will hold as a minimum qualifications equivalent to a postgraduate certificate or diploma in medical ultrasound, BSc (Hons) clinical ultrasound or an honours degree apprenticeship in clinical ultrasound that has been accredited by the Consortium for the Accreditation of Sonographic Education (CASE). They are either not medically qualified or hold medical qualifications but are not statutorily registered as a doctor in the UK'.[5]

Sonographers undertake screening and diagnostic ultrasound examinations throughout pregnancy and postnatally. They assess referrals, undertake the most appropriate examination, interpret, analyse and report on their findings and communicate the findings to the parents, so have a high degree of responsibility in the screening and diagnostic process [6].

1.4 About psychologists

Psychology is the study of how people think and behave – a combination of science and practice. Using direct observation, interviews and techniques such as psychometric testing, psychologists assess a patient's clinical condition. Treatment requires the cooperation of the patient and psychologists will work in partnership with them to treat and manage their condition. This will usually take place over a series of sessions. Two types of psychologists are included in the guide:

1.4.1. Clinical psychologists

'Clinical psychologists are trained to work with individuals of different ages with behavioural, emotional and/or psychological distress which disrupts their everyday functioning and well-being. They aim to reduce distress and to enhance and promote psychological well-being, minimise exclusion and inequalities and enable service users to engage in meaningful relationships and valued work and leisure activities.'

1.4.2. Health psychologists

'Health psychologists apply psychology to preventing health, managing illness and improving the healthcare system. They are trained to help people of all ages change their health-related behaviour to keep well and to deal with the psychological and emotional aspects of health and illness. They also work with health professionals, using psychology to enhance communication skills, teamwork and health-related organisational change.'

1.5 Strategic context

Currently there is limited awareness, understanding and visibility of the roles of AHPs and psychologists working across the maternity care pathway.

The National Maternity Review[7] set out several recommendations including:

- **Personalised care**, centred on the woman, her baby and her family, based around their needs and their decisions, where they have genuine choice, informed by unbiased information.
- **Continuity of care**, to ensure safe care based on a relationship of mutual trust and respect in line with the woman's decisions.
- **Safer care**, with professionals working together across boundaries to ensure rapid referral, and access to the right care in the right place; leadership for a safety culture within and across organisations; and investigation, honesty and learning when things go wrong.
- **Better postnatal and perinatal mental health care**.
- **Multi-professional working**, breaking down barriers between midwives, obstetricians and other professionals to deliver safe and personalised care for women and their babies.
- **Working across boundaries** to provide and commission maternity services to support personalisation, safety and choice, with access to specialist care whenever needed.

A report by the Royal College of Psychiatrists [8] highlights that *'Good perinatal mental health services will provide an integrated care pathway with a range of services, including clinical psychology services linked to maternity hospitals.'*

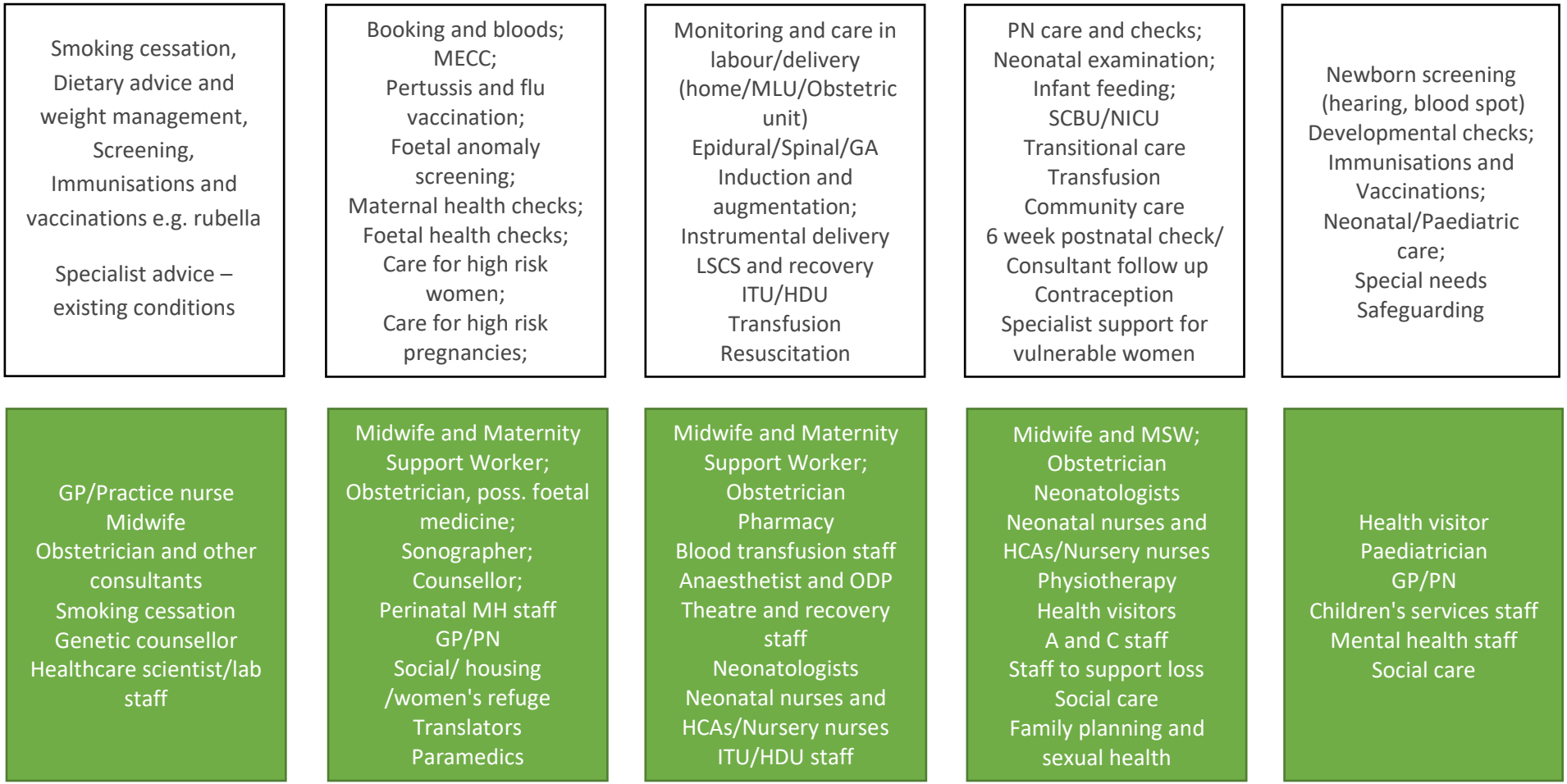
Specialised mother and baby units provide psychiatric care for women with serious perinatal mental health conditions who cannot be safely or adequately treated at home. They admit mothers together with their infants. They provide medical, nursing, psychological and social care for mothers and their infants, meeting the emotional and physical needs of both.

For a 6-bedded specialist mother and baby unit there should be 0.5 whole time equivalent (WTE) clinical psychologist. Their role will include providing psychological assessments and treatments for the patients, supervising other staff delivering psychosocial interventions and leading mother and infant interventions.

There should be 0.5 WTE occupational therapists devoted to the mother and baby unit. Their role should include assessing and assisting activities of daily living for new mothers and organising personal and group activities for mothers and their infants.

It should be noted that there is scant reference to AHPs and psychologists in local maternity workforce plans (Figure 2). When mapping the workforce for the maternity patients journey paramedics are mentioned in the antenatal stage, operating department practitioners during the intrapartum stage and physiotherapists during post-natal care.

Figure 2 Maternity patients' journey – mapping the workforce



2.0 Approach to undertaking this work

There was engagement with each of the professional bodies that represent the AHP professions[c] to gain a greater understanding of the activity of AHPs and allied health support workers in the maternity care pathway (Table 1). There was also engagement with the Royal College of Midwives.

Table 1 Professional bodies that contributed to the guide and the professions they represent

Professional body or equivalent	Profession
Association for Perioperative Practice (AfPP)	Operating Department Practitioners
British Association of Art Therapists	Art therapists
British Association of Drama Therapists	Drama therapists
British Association for Music Therapy	Music therapists
British Association of Prosthetists and Orthotists	Prosthetists and orthotists
British and Irish Orthoptic Society	Orthoptists
British Dietetic Association	Dietitians
British Psychological Society	Psychologists
British School of Osteopathy	Osteopaths
Chartered Society of Physiotherapy	Physiotherapists
College of Operating Department Practitioners	Operating Department Practitioners
College of Paramedics	Paramedics
Institute of Osteopathy	Osteopaths
Royal College of Occupational Therapists	Occupational Therapists
The Society and College of Radiographers	Diagnostic radiographers and sonographers[d]

[c] The College of Podiatry advised that there is no involvement of podiatry in the maternity pathway so there is no further mention of podiatry in this guide.

[d] The Society and College of Radiographers (CoR) administers a Public Voluntary Register for those individuals practising as sonographers.

AHS has considered the four impacts set out in AHPs into Action [9] as a framework to gather information:
Impact 1 – AHPs will improve the health and wellbeing of individuals and populations
Impact 2 – AHPs will support and provide solutions to general practice and urgent and emergency services to address demand
Impact 3 – AHPs will support integration, addressing historical service boundaries to reduce duplication and fragmentation.
Impact 4 – AHPs will deliver evidence based/informed practice to address unexplained variances in service quality and efficiency.

Specific information collected has included:

- A description of the roles of each profession across the maternity care pathway from pre-conception through to one year post birth including the sectors and settings AHPs and psychologists work in to deliver support to maternity services.

Good practice examples are included in the guide as either:

- Examples of services that the professions are involved in in the maternity care pathway from pre-conception through to one year post birth and include patient case studies
- Distinct patient case studies

3.0 Summary of findings from the work

A summary of where each profession is involved across the maternity care pathway from pre-conception through to one year post birth including the sectors and settings AHPs and psychologists work in to deliver support to maternity services is provided in the guide (Table 2).

Table 2 Allied Health Professions and psychologists' contributions at each stage of the maternity care pathway from pre-conception to one year post birth

	Stages of the maternity care pathway				
Profession	**Pre-conception**	**Ante-natal**	**Intrapartum**	**Post-partum**	**One year post birth**
Art therapists	✓	✓	x	✓	✓
Diagnostic radiographers	✓	✓	x	✓	✓
Dietitians	✓	✓	✓	✓	✓
Drama therapists	x	x	x	✓	✓
Music therapists	x	✓	x	✓	✓
Occupational therapists	✓	✓	✓	✓	✓
Operating department practitioners	✓	✓	✓	✓	✓
Orthoptists	✓	✓	x	✓	✓
Osteopaths	x	✓	x	✓	✓
Paramedics	x	✓	✓	✓	✓
Physiotherapists	✓	✓	x	✓	✓
Prosthetists and orthotists	x	✓	x	✓	✓
Psychologists (clinical psychologists and applied psychologists)	✓	✓	x	✓	✓
Sonographers	✓	✓	x	✓	✓
Speech and language therapists	✓	✓	x	✓	✓

A summary of the 39 good practice examples listed by profession and where the examples are focussed in the maternity care pathway is shown in table 3.

Table 3 A summary of the good practice examples by profession and stage of the maternity care pathway

		Stage(s) in the maternity care pathway where each good practice example is focussed				
Profession	**Good practice example title**	**Pre-conception**	**During the antenatal period**	**Intrapartum**	**During the post-partum period**	**Up to one year post birth**
Art therapists	**Art Psychotherapy practice in a Perinatal and Parent Infant Mental Health out-patient Service (PPIMHS)**	✓	✓	✓	✓	✓
	Dyadic art therapy					✓
Diagnostic radiographer	**Breast cancer in pregnancy**		✓			
Dietitians	**Recommendations from the international evidence-based guideline management of polycystic ovary syndrome: The evolving role of the dietitian and AHPs**		✓			
	Supporting an enterally-fed patient during pregnancy		✓			
	Evaluation of a structured education for women diagnosed with gestational diabetes		✓			
	Bariatric dietetic service and involvement in the maternity care pathway		✓		✓	✓
	Colostrum harvesting in gestational diabetes to promote breast feeding and prevent hypoglycaemia.		✓		✓	✓
	Enhancing Recovery of Women likely to undergo Elective Caesarean Section: The evolving role of the dietitian and AHP's		✓		✓	✓
	Preventing Maternal Phenylketonuria Syndrome in the children born to women with phenylketonuria		✓		✓	✓
	Use of pasteurized human donor milk (PHDM) in a community setting		✓			✓

Music therapists	Music While You Wait: music therapy in maternity services at Chelsea and Westminster hospital		✓		✓	✓
	Mother-infant music therapy in an NHS inpatient unit for women with postpartum depression and psychosis.		✓		✓	✓
	Music Therapy with a very premature baby – caring for the family				✓	
	Music Therapy with a premature baby – caring for the family				✓	✓
Occupational therapists	Preparing for the new arrival		✓			
	Getting over the Bump: A collaborative project between Maternal Medicine Midwives and Occupational Therapy		✓		✓	
	A range of approaches supporting families who have a child with severe and complex autism when their mother becomes pregnant and/or has a new baby		✓		✓	✓
	Co-creation of a new perinatal service for mothers with mental health needs in Lancashire and South Cumbria.				✓	✓
	Occupational therapy involvement in a mother and baby unit. Interventions addressing priority occupational needs of dysfunction impacting upon ability to address activities of daily living, loss of role, inability to access opportunities for social inclusion and changes affecting lifestyle balance.		✓		✓	✓
	Occupational therapy involvement to assess and support a client in order to maximise safety and independence during pregnancy and as a new parent.		✓		✓	✓
	Keeping well post birth group Identifying and addressing potential challenges to occupational deprivation or imbalance which may increase risk of post-partum mental health issues					

	The Tameside and Glossop Integrated Parent Infant Mental Health Pathway which includes perinatal /parent infant mental health care provided from Healthy Minds Tameside and Glossop. Pennine Care Adult Mental Health Babies can't wait Agenda.	✓	✓		✓	✓
Osteopaths	**Laura with Symphysis pubic dysfunction**		✓		✓	
	Sue with hypermobile joints		✓		✓	
Paramedics	**The London Ambulance Service (LAS) pioneering midwifery service**	✓	✓	✓	✓	✓
Physiotherapists	**Musculoskeletal pain pathway through antenatal care, post-partum and up to one year post birth**		✓		✓	✓
	Physiotherapist extended scope practitioner perineal clinic		✓		✓	✓
	Postnatal inpatient physiotherapy care pathway		✓		✓	✓
Psychologists (clinical psychologists and applied psychologists)	**Bump Start: Developing and piloting a healthy living group intervention for obese pregnant women**					
	Training maternity services in Healthy Conversation Skills (HCS) to meet the government's "Making Every Contact Count" (MECC) agenda.	✓	✓	✓	✓	✓
	E-learning to facilitate student midwives' engagement in effective conversations about weight-related behaviour change with pregnant women.		✓		✓	✓
	Infant Mental Health: Babies, Brains and Bonding- 2000+ practitioners trained!	✓	✓	✓	✓	✓
	Baby Elsie: Supporting Complex Parental Mental Health Difficulties					✓
Sonographers	**Antenatal ultrasound - A day in the life of an obstetric sonographer**		✓			
	Multiple pregnancy ultrasound care pathway		✓			

Speech and language therapists	**Working with women who are pregnant and have a learning disability**		✓			
	Communication assessment and recommendations for staff		✓			
	Supporting adults with learning disabilities through pregnancy, childbirth and parenting	✓	✓	✓	✓	✓
	Speech and language therapists working in the learning disabilities parenting team		✓		✓	✓

4.0 Description of the role of each profession in the maternity care pathway and good practice examples

The following section highlights each of the professions alphabetically to provide a description of the role of each profession in the maternity care pathway and good practice examples[e] for some of the professions from:

- pre-conception,
- during the antenatal period
- intrapartum
- during the post-partum period
- Up to one year post birth

[e] Each contributor is responsible for the accuracy of the information shared in the good practice examples. Allied Health Solutions and Health Education England have not validated the published information.

4.1 Art therapists

Description of the role of art therapists in the maternity care pathway	Settings where art therapists work
Art therapists collaborate closely with psychologists and psychotherapists across the maternity care pathway. Throughout the maternity care pathway, they provide art therapy to women at risk such as those suffering with depression, post- traumatic stress disorder and psychosis.	
During the pre-conception period: • Art therapists provide art therapy to couples who undergo infertility treatment.	NHS infertility services or private clinics
During the antenatal period: • Art therapists adopt a psychodynamic and systemic approach and offer attachment based treatments designed to strengthen the antenatal parent-infant relationship. • Art psychotherapy is a powerful form of psychotherapy that stimulates the area of the brain that is used before spoken language develops and where visual and sensory memories are stored. This approach allows the pregnant woman (and partner if they are willing) to express thoughts and feelings dynamically by interacting with their senses through the use of art materials available to them in the therapy room. It requires no previous experience in art, however, does require a desire to interact. This can be alternative or complementary to talking about problems. • Art therapists support the pregnant woman in a safe and sensitive manner and encourages them to explore the images made in order to better understand themselves, their illness and, most importantly, how they might shift their mind-set to better bond with their unborn baby and improve relationships with other extended family members.	NHS services and charities working with refugees and asylum seekers Nursery settings
During the post-partum period and up to one year post birth: • Provide art therapy to parents in cases of stillbirth or infant death • Art therapists adopt a psychodynamic and systemic approach and offer attachment based treatments designed to strengthen parent-infant relationships. • Art psychotherapy allows the mother (and the father / partner if they are willing) to express thoughts and feelings dynamically. The art therapist supports the parent or carer in a safe and sensitive manner and encourages them to explore the images made in order to better understand themselves, their illness and, most importantly, how they might shift their mind-set to better bond with their baby and improve relationships with other extended family	

members. The work is dyadic and is undertaken with mother (father / carer) and baby together in the therapy room where *'the relationship between'* often becomes the patient.

Good practice examples – Art therapists

Art Psychotherapy practice in a Perinatal and Parent Infant Mental Health out-patient Service (PPIMHS)

Stage of maternity care pathway where good practice is focussed	Pre-conception Antenatal Post-partum First year post birth
Summary description of initiative	The perinatal service where I work provides an arts therapy service to ante and postpartum mothers, infants and their families, as recommended by the Royal College of Psychiatrists (RCPsych). I completed a service review and audit in July 2017 to contribute to the department's accreditation by the RSPsych College Centre for Quality Improvement (CCQI). This review was designed to reveal whether such a creative approach adds value to PPIMHS. Further details of this account can be found in the full report, due to be published in the International Journal of Art Therapy (IJAT).
Approach/methodology	There is a close collaboration between the psychologists and psychotherapists at PPIMHS. We adopt a psychodynamic and systemic approach and offer attachment based treatments designed to strengthen parent-infant relationships. Art psychotherapy is a powerful form of psychotherapy that stimulates the area of the brain that is used before spoken language develops and where visual and sensory memories are stored. This approach allows the mother (and the father / partner if they are willing or invited) to express thoughts and feelings dynamically by interacting with their senses through the use of art materials available to them in the therapy room. It requires no previous experience in art but does require a desire to interact. This can be alternative or complementary to talking about problems. The therapist supports the parent or carer in a safe and sensitive manner and encourages them to explore the images made in order to better understand themselves, their illness and, most importantly,

	how they might shift their mind-set to better bond with their baby and improve relationships with other extended family members. The work is dyadic and is undertaken with mother and baby together in the therapy room where *'the relationship'* becomes the patient.
Key learning points and top tips	The art therapy process is fully assessed and supported by a rigorous multi-disciplinary care plan that puts the infant's voice at the centre of decision making. Early intervention at this tentative threshold can prevent the infant from experiencing mental health problems during their childhood development and throughout their lifespan. This can benefit society as a whole. Art psychotherapy provides a fresh, grounded, 'bottom-up' physiological approach for those mothers and families who find it hard to talk and trust in relationships. The PPIMH arts therapy service review found that this creative approach adds positive value to perinatal parent infant mental health and to the population it serves. The perinatal period provides a window of opportunity to help repair impaired representations of attachment and their intergenerational transmission.
Background/context of the case example cited below	Here I wish to illustrate how art psychotherapy helped one ill mother find space in her mind to think about the pressing needs of her young baby. The family were referred to our service by their health visitor who had concerns about mum's difficulty bonding with her son. The mother was willing to engage with our service and gladly granted me written permission to speak about the work we did together, as she is keen to help others like herself access this creative approach at what was an important moment in her journey. Pseudo names have been used here to protect anonymity.
Case example depicting service user's story	*Mother Sandra had a frightened and confused childhood and experienced being locked in a bedroom for hours on end by parents who had alcohol addictions. She has suffered with bouts of depression since adolescence and, on several occasions, tried to take her own life before falling pregnant with*

her first child at 17. Sandra also reported suffering symptoms of postnatal depression following two subsequent pregnancies.

I first met Sandra 18 years later, shortly after the birth of her fifth child. She described Billy as unplanned and 'definitely her last'.

Whilst Billy lay motionless in his car seat, Sandra spoke of feeling 'lost, lonely and in despair'. She said she felt 'worse than ever before'. I remember Sandra hardly looking at Billy during our first meeting. She could not understand why she felt the way she did.

Phase 1

Sandra used clay that I had given her to create an image of a baby (see Image 1). She then cast it aside saying it was *'useless'*. In a different session she made a portrait of herself as a child (Image 2). She scratched a chalk image of herself shut away in a brown box. The box lay beneath her overpowering father (Billy's maternal grandfather) who's face she said she *'could not think about'*.

These and other early images indicate that Sandra saw herself as an unwanted and disappointing child. Her parents had embedded humiliating and persecutory feelings into her and, instead of love, Sandra had been 'stuffed' with rubbishy snacks that eventually became her attachment figure.

Until now Sandra had created internal defenses that guarded against recognising these emotions, but they remained dynamically alive in her unconscious mind.

She was unaware of how she projected her empty, starving self into baby Billy's developing self, and how this deprived him from thriving. She unknowingly wanted her baby to feel robbed of affection, just like she felt robbed. This resulted in Billy's authentic needs being badly distorted by Sandra's overwhelming and confusing past.

Phase 2

Not until later in the therapy process did Sandra begin to make the connections between her images and the loss and shame, she herself had suffered as a child.

Sandra gradually accepted gentle guidance to aid her understanding of how these thoughts and feelings had become 'stuck' inside her and were now affecting her relationship with baby Billy. Sandra slowly began to feel Billy's pain and relate it to her own 'childhood' pain.

Sandra became more trusting of my authenticity as she became more trusting of herself and what the art materials and therapy process offered. She became more confident about what her hands could make. She came to use her whole arm movement to draw across the expanse of paper on the therapy room wall before going on to create a cohesive visual narrative that revealed the fullness of the 'rubbish' she described as suffocating her mind.

The more she used her hands to wonder and to play, the more Sandra created room in her mind to think about baby Billy's needs and how he too could be stimulated by play too. Sandra's relationship with Billy became increasingly animated. Instead of leaving him swaddled in his car seat, she thoughtfully began to give him much needed space to stretch his arms and reach for toys in the way that she reached to draw with her hands.

Phase 3

I last met with Sandra to review the work. She now recognised that having more children would not fill her with the unconditional love she had not received as a child. She also stated that *'having someone listen and witness her story in a non-judgmental way'* had helped her *'learn how to trust'*.

We reflected on oone of the first images Sandra made (Image 3). It was of a black 'empty' sun (the red waves represented the heated arguments she witnessed as a child). She could now see that the blackness in her image represented a part of her mind that was neglected by her parents. Sandra said she did not ever want Billy to experience feeling like this.

Her readiness to understand and trust herself meant that she began to understand and meet Billy's needs. She will say that the shift came first through her hands and the safe space she was given to, as she said, *'purge out her feelings using the art materials'*.

One of Sandra's later images (see Images 4 and 5) *'Light at the End of the Tunnel'* includes representations of the flickers of sunlight reflecting from a mirror ball hanging in the therapy room.

It symbolises the joy she came to find in herself and the hopeful future for Billy and his developing self.

The support of the PPIMHS and other allied services helped this mother to make positive shifts in her relationship with her baby. This will impact positively on his future development and benefit society as a whole.

Examples of material produced/resources used

Bruce, D. (2017). Perinatal Parent Infant Mental Health (PPIMHS) Creative Arts Therapy Service. Service Evaluation and Audit. *International Journal of Art Therapy (IJAT)* (Due for publication).

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Jones, A. (2005) *The Process of Change in a Parent-Infant Psychotherapy*. Doctoral dissertation. London: Tavistock.

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Schore, A. N. (2003) *Affect Regulation and the Repair of the Self*. New York: Norton.

Images referred to in text:

IMAGE 1:

IMAGE 2

IMAGE 3:

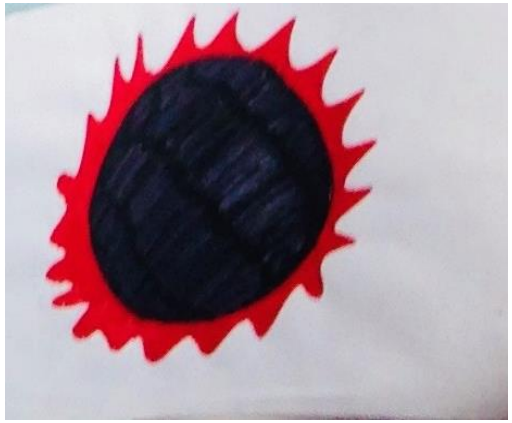


IMAGE 4:

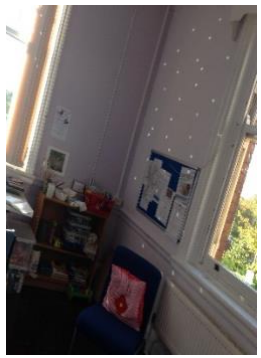
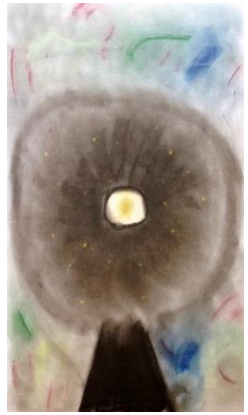


IMAGE 5:



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Dyadic Art Therapy

Stage of maternity care pathway where good practice example is focussed	First year post birth
Summary description of initiative	Working with a mother and child including a sibling under one year old. Dyadic art therapy approach aimed at strengthening mother child relationship through art making and reflection.
Background/context	Art therapy has been part of the services at Kate Greenaway Nursery for 13 years. Art therapy is offered to children and families and is available to any nursery child from the age of 6 months upwards.
Approach/methodology	My approach is psychodynamic art psychotherapy, using art making within a therapeutic relationship. My approach has been published in a book: 'Art Therapy in the Early years' which details art therapy approaches from eleven different practitioners. Alongside the traditional symbolic aspects of art therapy my approach includes using the therapeutic sensory qualities of art making. These qualities replicate important processes and experiences of early childhood (such as mastering control of bodily processes, discovering physical boundaries through skin experiences etc)
Results and evaluation	As well as the published material my work is evaluated through a review and feedback process with my line manager and with parents.
Key learning points and top tips	Art therapy provides opportunities for parents and babies to strengthen attuned, reciprocal relationships within a containing and safe therapeutic relationship.
Plans for spread	Publishing material. Lecturing on my approach; providing in service training. Supervising staff and other art therapists
Examples of material produced/resources used	Meyerowtiz-Katz, J. and Reddick, D. (eds) (2017) Art Therapy in the Early Years: Therapeutic Interventions with Infants, Toddlers and Their Families. Routledge. London and New York

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4.2 Diagnostic radiographers

Description of the role of diagnostic radiographers in the maternity care pathway	Settings where diagnostic radiographers work
During the pre-conception period: • Diagnostic radiographers undertake hysterosalpingograms • Follicle tracking can be done by radiographer-sonographers and/or nurse-sonographers.	Outpatient X-ray & Ultrasound
During the antenatal period: Diagnostic radiographers undertake: • Chest X-rays for pulmonary embolisms • CT scans of the thorax for pulmonary embolisms • Nephrostomy insertion for kidney drainage – ureteric occlusion due to pregnancy • Inferior vena cava filter insertion for prevention of pulmonary embolus from deep vein thrombus • Planned right and left internal iliac balloon insertion for arterial occlusion to prevent uterine bleeding. • Trauma imaging – requires specific considerations for both mother and child. • Disease diagnosis unrelated to pregnancy requires specific considerations for both mother and child such as those with cancer, epilepsy, multiple sclerosis, rheumatoid. Diagnostic radiographers would be part of the care pathway in all of these conditions.	Interventional radiology suite/emergency theatre
During the post-partum period: Diagnostic radiographers undertake: • Chest/Abdomen X-ray / fluoroscopy for query retained foreign body (e.g. swabs even though a never event). • Mobile chest WX-ray post-partum acute emergency (Mother).	

• Neonatal Intensive Care mobile chest X-ray • Neonatal post birth trauma examinations e.g. query a fractured clavicle, humerus etc. • Right and left internal iliac balloon insertion for arterial occlusion to prevent intra and post-partum uterine bleeding • MRI – uro-genital imaging for birth trauma injuries	Theatres or main X-ray department. ITU NICU
Up to one year post birth: Diagnostic radiographers undertake: • Neonatal skeletal survey (CT and MRI) to exclude metabolic bone disease or physical abuse • MRI/CT developmental delays • MRI/CT/general x-ray: - accidental trauma • Imaging investigations for pathology / symptomatic cases	Main X-ray department (acute)Interventional radiology suite/emergency theatre Paediatric outpatients Paediatric in patients

Good practice examples – Diagnostic radiographers

Breast cancer in pregnancy

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	Assess the affected breast for lesion size and focality and the contralateral axilla (for staging) using imaging, ultrasound and mammography) and refer for staging if indicated.
Background/context	32 year old, gravida one. 38 weeks gestation. Presented with a non-tender mobile breast lump in the right upper outer quadrant of her breast. Suspicious for a galactocele.
Approach/methodology	Targeted ultrasound scan of the right breast was performed which demonstrated a hypoechoic ill-defined area of textural change in the upper outer quadrant which could be due to infection. The differential diagnosis was breast cancer. Mammograms were performed. Mammograms demonstrated increased density and trabecular pattern with some microcalcification and associated skin thickening in the right breast. An ultrasound guided core biopsy of this region was performed under local anaesthesia. The core biopsies were taken for histology and microbiology analysis. This was to confirm cancer and rule out infection as the underlying cause. In the contralateral axilla several abnormal appearing lymph nodes were seen (thickened cortices/lost morphology). FNA of the most abnormal one was also performed under ultrasound guidance to assess for metastatic spread to the lymph nodes. In young patients an MRI of the breasts is typically performed to provide a more sensitive assessment of both breasts and confirm the dimensions of the cancer present. At this stage in pregnancy MRI is not possible. This lady's pregnancy was induced immediately after diagnosis and MRI was subsequently performed.

Results and evaluation	Histological core biopsy results identified a grade II invasive lobular carcinoma. No infection was seen in the microbiology specimen. The FNA of the axillary lymph node was insufficient so a core biopsy was subsequently performed demonstrating metastatic carcinoma cells. Following delivery, the patient was then referred for CT staging of her chest, abdomen and pelvis and a bone scan. No evidence of metastatic spread was seen on the CT scan or bone scan. The patient underwent a wide local excision of the right breast and axillary clearance which was followed by chemotherapy and radiotherapy. She remains in treatment and will have regular follow up for 5 years.
Key learning points and top tips	Pregnant women with breast masses should be treated the same as someone who is not pregnant whereby a similar protocol for imaging is carried out. Ultrasound would be the first preferred imaging modality in all ladies, but mammography can still be performed safely. Mammography is deemed a safe procedure even during pregnancy as there is no intra-abdominal radiation dose. Consideration will still need to be given to the sensitivity of the examination (particularly mammography where there is increased breast density during pregnancy and postpartum). It is important not to assume that the patient has an infection which is a common cause of breast lumps during pregnancy but to assess for carcinoma performing biopsies if there is any suspicion. FNA's in the breast tissue during pregnancy are often difficult to analyse and core biopsies should be taken in the breast wherever possible.
Plans for spread	Standard approach to assess pregnant women for breast disease.
Examples of material produced/resources used	Early and locally advanced breast cancer: diagnosis and management. NICE guideline [NG101]. Published 2018.

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4.3 Dietitians

Description of the role of dietitians in the maternity care pathway	Settings where dietitians work
During the pre-conception period: • Women who are in contact with dietetic services pre-conception usually have conditions such as: Metabolic disorders- phenylketonuria, maple syrup urine disease, galactocaemia, glycogen storage disease, diabetes, obese or post bariatric surgery • Dietitians provide women's health nutrition and lifestyle advice on [10] Weight management [11], Post-bariatric surgery fertility considerations and risk nutrient deficiency[12 13 14], Diabetes [15], Polycystic Ovarian Syndrome [16 17], Obesity [18 19 20 21] and nutritional care and counselling care for women with eating disorders [22], plant based and other dietary restrictions advice [23 24]. • Dietitians provide men's nutrition and lifestyle advice on [25] weight management, nutrition and supplementation in fertility [26 27] • In the care of women with metabolic condition dietitians are often the main point of contact if there is an acute issue e.g. unplanned pregnancy or illness, and we coordinate care during pregnancy – linking in our letters to midwives, GPs and obstetricians, following up with the multidisciplinary team if patients need antiemetics or fertility referrals or psychology input or consideration of admissions, safeguarding issues etc. • For women who have had bariatric surgery pregnancy planning will be included at education group and assessment clinic and give individual advice about pre-conception post op. Women of childbearing age are advised to avoid pregnancy for 18 months to 2 years post bariatric surgery and they are encouraged to contact services when planning pregnancies.	Gynaecology clinic. Community clinic. In-hospital Paediatric clinic Call centre Telehealth

During the antenatal period:

- Dietitians working in antenatal services support women throughout their pregnancy in-order to promote optimal nutritional intake. The need for dietary support could be due to medical conditions or symptoms during pregnancy e.g. hyperemesis.
- Dietitians provide pregnancy nutrition and lifestyle advice on [28] healthy weight gain (normal pregnancy trimester based, multiple births, overweight, underweight patients) [29 30 31], managing symptoms of pregnancy that affect balanced dietary intake [32 33], nutritional supplementation during pregnancy [34 35 36], risky lifestyle and nutritional habits [37 38 39], pregnancy in women with bariatric surgery, vitamin supplementation and monitoring [40] Special diets: vegan and very restricted diets [41].
- Pregnancy in women with chronic conditions with associated high risk of nutrition deficiencies. Example: inflammatory bowel disease, short bowel resections, renal insufficiency.
- Dietitians provide advice on gestational diabetes nutritional management and prevention of associated poor outcomes [42 43 44 45], obesity [46 47 48 49 50 51] and pre-eclampsia [52 53] and multiple pregnancies nutritional and weight gain advice [54 55] .
- In those with metabolic conditions the dietitian reviews bloods regularly and shares these results with the patient and GP. They provide dietary advice to maintain target blood levels throughout pregnancy. Patient is advised on protein adjustments for specific metabolic conditions throughout pregnancy as required. In unplanned pregnancies, the dietitian will provide emergency support.
- In bariatric patients all pregnant women are seen by a bariatric dietitian to provide a dietary assessment which includes advice regarding vitamin and mineral supplements, food safety, dietary intake and weight gain during pregnancy. Nutritional bloods and weight are monitored at least 3 monthly by the dietitian.
- A dietitian will see women with type 1 and 2 diabetes (specifically those post bariatric surgery, type 2 and starting insulin, women with a learning disability or a language barrier and other complex dietary needs) on a 1:1 basis.
- Dietitians are involved in multidisciplinary feeding clinics with a lactation consultant/infant feeding lead and children's dietitian for mothers (if applicable); mothers expecting multiple births, or whose babies have medical complications diagnosed during pregnancy, women who have had previous problems with breastfeeding are seen within this clinic. The MDT team review the mother's ability to breastfeed

e.g. appropriate breast changes etc have taken place during pregnancy to indicate that breastmilk will be produced. Dietetic staff ensure women receive the most appropriate support immediately post birth.

- Dietitians also provide support for women suffering from a range of pregnancy related symptoms, e.g. hyperemesis, constipation, heartburn and nausea, medical complications through pregnancy, women with eating disorders, women not meeting nutritional needs due to poor diet quality (education regarding importance of healthy balanced diet and lifestyle provided), women with nutritional deficiencies e.g. iron, folate, etc.

During the intrapartum period:

- Dietitians, where appropriate, develop pre-caesarean nutrition plans on: Enhanced Recovery After Surgery (ERAS) in C- sections and colostrum harvesting in gestational diabetes .

During the post-partum period:

- Dietitians provide women's health nutrition and lifestyle advice on a healthy diet when breastfeeding [56] [57], supplementation support when breastfeeding[57] [58] [59], normalisation to healthy weight while supporting breastfeeding [60] , post-gestational diabetes nutrition education and monitoring and prevention of diabetes [61].
- Dietitians provide infant health advice on nutritional support of lactation [58] benefits of breast milk [62], expressing and safe storage [63], formula milk, safe preparation and storage [64] , when is feeding going well and what to look for when it is not [58] [59], normal growth of new-borns [65] and unsafe feeding practises in the first 4 months of life.
- Infants born to women with metabolic conditions are screened earlier than routine. If they are diagnosed with the condition they are referred to their local paediatric metabolic centre for initiation of dietary treatment. Emerging patient experience data suggests that women with PKU would like more support after delivery to continue their PKU diet and optimise their neurocognition and psychological wellbeing as they embark on motherhood. Dietitians have a role in supporting ongoing adherence to the complex PKU diet with minimal demand on the new mother and providing the optimal nutrition to support good metabolic control and breastfeeding.

- Women who are obese or post bariatric surgery are most often followed up in their mainstream services in line with their identified needs
- In neonatal intensive care units dietitians will have direct involvement in the design of the intravenous nutrition solutions used to ensure optimum nutrition as soon as possible in sick new born infants where providing nutrition is critical. Ensure early enteral feeding occurs using buccal colostrum and well as trophic feeding, supporting mothers in providing expressed breast milk and advising on individual feeding regimens as parenteral nutrition is replaced by milk according to biochemistry, feed tolerance, and weight changes. This is now an integral part of the early management of these sick infants leading to better long term neurodevelopmental outcomes. They will continue to monitor nutrition, feeding and growth of those babies at greatest nutritional risk.
- Dietitians wider involvement in the unit includes teaching all medical and nursing staff involved in the prescription and dispensing of intravenous and enteral nutrition and acting as a consultant in nutrition and feeding issues.

Up to one year post birth:

- Dietitians provide infant health advice on supporting lactation during the first 6 months of life [57] [58] [59] [62], normal growth of infants [65], weaning [66] [67], cows-milk protein allergy screening and support in first 6 months of life [68] [69] [70] [71] and anaemia in infants [72].
- In families coping with vulnerable a child at risk of metabolic decompensation. The dietitian may need to support with illness management. Dietitian monitors weekly blood results as well as (weekly or fortnightly) growth and changes in dietary requirements. Very often an out of hours dietetic service also provided.

Good practice examples – Dietitians

Recommendations from the international evidence-based guideline management of polycystic ovary syndrome: The evolving role of the dietitian and AHP's

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of the initiative	Women with polycystic ovary syndrome (PCOS) have a higher prevalence of weight gain and obesity, presenting significant concerns for women, impacting on health and emotional wellbeing, with a clear need for prevention. [1] European Society of Human Reproduction and Embryology (ESHRE) international guidelines promote that all women living with PCOS should be offered regular monitoring for weight changes and excess weight gain. Dietary and lifestyle interventions play a key role on the management of the severity and negative impact on QoL and fertility outcomes in PCOS. [2]
Background/context	The International guideline on the management of PCOS was primarily funded by the Australian National Health and Medical Research Council of Australia (NHMRC) supported by a partnership with the European Society of Human Reproduction and Embryology and the American Society for Reproductive Medicine.
Approach/methodology	International systematic review and consensus guideline.[2] Randomised control trials. [3]
Results, Recommendations and evaluation	**Dietary intervention** • Dietetic assessment and frequent weight monitoring is needed once a patient is diagnosed with PCOS as these women/girls have high rates of weight gain and obesity placing them at risk for chronic lifestyle related diseases such as CVD and diabetes.[2]

- A dietitian is the best qualified HCP to assess which balanced dietary approaches should be recommended to reduce dietary energy intake and induce weight loss in women with PCOS and overweight and obesity, as per general population recommendations.[2]
- ESHRE recommends weight loss in those with excess weight, by means of an energy deficit of 30% or 500 - 750 kcal/day (1,200 to 1,500 kcal/day). This should be prescribed by a HCP who is qualified to take in account individual energy requirements, body weight and physical activity levels. [2]
- A dietitian is best qualified to tailor the needed dietary changes to food preferences, allowing for a flexible and individual approach to reducing energy intake and avoiding unduly restrictive and nutritionally unbalanced diets in women of child bearing age. [2]

Lifestyle intervention:

- HCP should encourage and advise on the following physical activity guidelines to attain and maintain a healthy weight of weight gain and maintenance of health:
- Adults 18 – 64 years of age, should engage in a minimum of 150 min/week of moderate intensity physical activity or 75 min/week of vigorous intensities or an equivalent combination of both, including muscle strengthening activities on 2 non-consecutive days/week. [2]
- Adolescents, require 60 minutes of moderate to vigorous intensity physical activity/day, including weight baring strength exercises 3 times weekly.
- Cardiovascular activity be performed in at least 10-minute bouts or around 1000 steps, aiming to achieve at least 30 minutes daily on most days.[2]

  For modest weight-loss, prevention of weight-regain and greater health benefits HCP should advise:

- a minimum of 250 min/week of moderate intensity activities or 150 min/week of vigorous intensity or an equivalent combination of both, and muscle strengthening activities involving major muscle groups on 2 non-consecutive days/week [2]
- minimised sedentary, screen or sitting time. [2]

Socio-economic benefits:

Weight loss programs through lifestyle modification in obese women, have been proven to restore menstrual cyclicity and ovulation and improve the likelihood of conception.[1,4]

A preconception weight loss intervention eliminates the adverse metabolic oral contraceptive effects and, compared with oral contraceptive pre-treatment, leads to higher ovulation rates.[3]

Key learning points and top tips

1. AHP (Dietitians) has a vital role in this initiative as the dietary and lifestyle guideline states specific interventions that is best implemented by suitably qualified HCP.
2. Dietitians have a crucial role to implement and set-up the nutritional protocols and SOP to support this pathway.
3. Dietitians has the most extensive nutritional assessment, patient education and monitoring knowledge to successfully implement specific guidelines of this pathway.

Examples of material produced/resources used	2018 International guidelines on the diagnosis and management of PCOS PENG resources for BDA dietitians American Dietetic Association: Polycystic Ovary Syndrome (PCOS) patient education resources for members. 1. Silvestris E, de Pergola G, Rosania R, Loverro G.(2018) Obesity as disruptor of the female fertility. Reprod Biol Endocrinol 2018;16(1):22. 2. Teede HJ, Misso ML, Costello MF, et al. (2018) Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. Clinical Endocrinology;89(3):251–68. 3. Legro RS, Dodson WC, Kris-Etherton PM, et al. (2015) Randomized Controlled Trial of Preconception Interventions in Infertile Women With Polycystic Ovary Syndrome. J Clin Endocrinol Metab 2015;100(11):4048–58. 4. Tziomalos K, Dinas K. (2018) Obesity and Outcome of Assisted Reproduction in Patients With Polycystic Ovary Syndrome. Front Endocrinol (Lausanne) ;9:149.
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Supporting an enterally-fed patient during pregnancy

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	- Experience of managing a long term tube fed patient who became pregnant - How to meet increased requirements when volume tolerance is an issue - The importance of making use of the multidisciplinary team in complex feeding scenarios
Background/context	Mrs N had been referred to the dietetic department in December 2009 with a history of intermittent vomiting for 2-3 years, which had escalated into vomiting after every meal over the last 6 months. In February 2010 she was admitted for naso-jejunal feeding. Mrs N was diagnosed with idiopathic gastroparesis in May 2010. After several years and trials without the tube, this was replaced by a direct puncture jejunal feeding tube in March 2014. Mrs N suffered with amenorrhoea but after her weight was restored, she was able to think about trying for a baby. Prior to announcing she was pregnant she was gaining weight well on a high energy feed. However, she was unable to tolerate it above 50mls/hr over 20 hours with a 4 hour break for water. Mrs N was able to tolerate small tasters of food as she had found not having small amounts caused her to vomit more. Interestingly, when she visited family in Mexico, she found she was able to eat fresh fruit without vomiting but when she tried this back in England she was unsuccessful.
Approach/methodology	***Research*** The dietitians and the dietetic assistant on the HEN team conducted a search to find any information about previous cases of pregnant, enterally fed patients, especially those with jejunal tubes. Unfortunately, very little information was available about jejunal feeding in pregnancy.

I also sent an email out to the virtual Home Enteral Feeding group of the BDA, requesting information. I received one reply and was able to get some helpful information from a dietitian who had supported a pregnancy patient with a gastrostomy tube.

Vitamins and minerals

Pregnant women are advised that except for folic acid and vitamin D they are able to get all the vitamins and minerals they require from food. Most women are advised to take a folic acid supplement from preconception up until 12 weeks gestation and vitamin D throughout the pregnancy[2]. Mrs N's feed was nutritionally complete, and she was eating small amounts. However due to her vomiting and history of low iron levels she was advised to continue her pregnancy vitamin and mineral supplement throughout. Her iron and vitamin D levels were checked throughout her pregnancy to ensure that they did not drop below a healthy range.

Guidance advises that pregnant women's Vitamin A intake should not exceed 1.5mg per day[3]. The content of Mrs N's feed and pregnancy vitamins were checked to ensure that she was not receiving an excessive amount of Vitamin A.

Extra calories in the 3rd trimester

NICE guidelines advise that expectant mothers require an additional 200kcal during their 3rd trimester[4]. Finding a way to provide additional calories for Mrs N was a challenge. An increase in rate to provide additional feed would not be tolerated. She had previously tried a concentrated carbohydrate supplement drink via her tube and was willing to try this again, but this was unfortunately also not tolerated.

She was therefore advised to increase the length of time the feed was running. This however shortened her break which she used to run water via her pump .This was overcome by giving water as boluses throughout the day.

Mrs N was able to drink fruit juices during the day and hot chocolate in the evening. She found that if this was not taken at the same time as food she was able to keep this down which also contributed to her calorie intake.

Weight gain

Both prior to conceiving and during her pregnancy Mrs N continued to vomit multiple times per day. This made it difficult to assess how much of her feed was absorbed and therefore her true calorie intake. In the UK there are currently no recommendations for the amount of weight that should be gained during pregnancy. However, it is thought that most women gain between 10-12.5kg during pregnancy[5]. Mrs N's weight was monitored throughout her pregnancy and by week 27 she had gained 8kg which indicated she was receiving enough calories.

Tube care

Enteral feeding tubes require slightly different management, depending on their type and location of placement. Our Nutrition Specialist Nurse recommended that her enteral feeding tube should be advanced regularly and rotated to prevent a buried bumper from forming. Mrs N had always been told by her Specialist Medical team in London, who had placed the tube that she should not advance or rotate the tube. Mrs N therefore did not rotate the tube at any point. The HEN team had questioned before pregnancy if the site needed to be reviewed internally, but her team Specialist Medical team locally and in London had thought this was unnecessary.

Mrs N's stoma site was also assessed during pregnancy and it was thought that the tube and stoma site would not be impacted by the growth of the baby.

Throughout her pregnancy the enteral feeding specialist nurse reviewed her tube. Towards the end of her pregnancy the area became very sore and bruised due the baby growing. Advice was given to reduce the redness and the stoma site was expected to return to normal following the birth of the baby.

Multi-disciplinary team

Mrs N was discussed in the HEN team's regular meetings which gave the team a chance to discuss any concerns and ideas.

In addition to being seen by the HEN team Mrs N attended a Nutrition Support Clinic. This is run as a multidisciplinary team clinic with consultants from gastroenterology, intestinal failure

surgeons and nurse, nutrition support nurse, specialist dietitians and a senior pharmacist. They also reviewed her nutrition and discussed her medications. It was important for me to liaise with the Nutrition Support Clinic dietitian to ensure that we were consistent with the advice given

Mrs N was seen regularly by her midwife and extra scans were carried out to check the growth of the baby. No concerns were raised, and the baby was thought to be growing normally.

Results and evaluation

Delivery

Towards the end of her pregnancy Mrs N became unwell and was admitted to her local maternity unit. She went into spontaneous labour at 32 weeks and delivered a healthy baby. However, a CT scan revealed that her jejunum had perforated; she required a laparotomy and washout. She was commenced on total parenteral nutrition. It was unclear if her jejunum perforated before, during or after labour.

Patient update

After several weeks in hospital Mrs N was able to go home with her son. She currently has a naso-jejunal tube in place for feeding and is awaiting a decision about what the most appropriate long-term feeding tube would be. She reports enjoying motherhood and has been successfully breastfeeding her son.

Key learning points and top tips

Moving forward

I found caring for an enteral fed expectant mother exciting, challenging and rewarding. I understood the importance of getting her nutritional intake right so that both the baby and mother were safe and healthy. I was informed that Mrs N's baby was born at a good weight for a premature baby. This provided some reassurance that the nutrition they had both received throughout the pregnancy was adequate.

Being part of the HEN team and knowing that the patient was being seen in Nutrition Support Clinic meant that I did not feel isolated but well supported throughout. Knowing that

there was an MDT around me who I could approach with any questions or concerns was important in providing the best support to the patient.

If I were to support another direct puncture jejunally fed patient through pregnancy again, I would be advocating for the doctors to consider removing the patient's jejunal tube and placing a naso-jejunal tube after 20 weeks gestation. Although there are issues with naso-jejunal feeding and they require changing regularly, removing the direct puncture jejunal tube would reduce the risk of the tube perforating the jejunum as the baby grows.

I again would keep vitamin A in mind as although her tube feed was not excessive this could be an issue in more concentrated tube feeds, if oral nutritional supplements were used or if the patient.

My advice to anyone who is managing a tube fed patient who is planning on becoming pregnant, is to encourage them to wait until they are as nutritionally stable as possible, to prevent further nutritional deficiencies during pregnancy.

Prior to becoming pregnant I would recommend discussing with the patient's consultant if there could be any potential issues with tube placement as the patient's body changes during pregnancy. For example, is it possible that their jejunal extension may migrate into the stomach as the baby develops? Having a plan to reduce the risks of tube misplacement or how a patient can have the tube replaced out of hours is also important, especially if they are solely reliant on the tube.

Having a good professional relationship with the patient is beneficial, this is likely to be an exciting, but also scary time for the patient and knowing that you are there to support them is important. Their feeding plan may need amending in the early stages of pregnancy if they are struggling with nausea and vomiting and then again in the last trimester when they need additional calories. Discuss the options with the patient so that they can make changes that fit in with their current routine.

If the patient continues to vomit during the pregnancy, I would advise that they continue to take a multivitamin and mineral supplement that is suitable for pregnancy, even if their feed is nutritionally complete to prevent deficiencies caused by vomiting.

	In my experience involving the MDT was important to help provide reassurance, but also so that the patient was getting a consistent message. If an MDT situation is not already set up, I would encourage the dietitian to reach out to other professionals and to seek supervision from another dietitian, especially if working in the community. I would recommend reaching out to the dietetic community to gain guidance and support if it is the first time a dietitian is managing a pregnant tube fed patient. The team found it quite daunting not knowing about other patients who had been in a similar situation. Dietetics is constantly evolving and sharing experiences is important to keep moving forward.
Plans for spread	Shared in Dietetics Today
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	Mrs N was asked if she would like to contribute to the article and initially agreed but found that due to her own health and caring for a new born she did not have time. She did consent to the article being written and to being used for this project.
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Evaluation of a structured education for women diagnosed with gestational diabetes

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	Evaluation of a 'Lifestyle for Gestational Diabetes' group, running twice weekly from the antenatal clinic Topics covered in the group: 1.Understanding gestational diabetes 2.The relationship between food and blood glucose 3.Balancing healthy eating with managing blood glucose 4.Physical activity in pregnancy 5.Recommendations for weight gain in pregnancy
Background/context	The 'Lifestyle for Gestational Diabetes' group was set up as part of a service improvement project.
Approach/methodology	The groups were evaluated using a two part questionnaire, provided to all women attending the group over a 4 week period. Part 1 was an MCQ to assess changes in knowledge before and after the groups. Part 2 was free text boxes asking for feedback on the most useful parts of the group and areas for improvement.
Results and evaluation	Means scores rose from 70% before the session to 80% after the session. 19 of the 24 women who completed the questionnaires provided free text comments, all positive and no suggestions for improvement. Women liked the visual aspects of identifying foods that raise blood glucose and meal planning using food models and information about carb awareness and portion size.

Plans for spread	Groups to be offered to all women diagnosed with gestational diabetes
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Bariatric surgery dietetic service involvement in the maternity care pathway

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	The bariatric and dietetic service is very involved in pre-conception, antenatal and post-natal care, advising and supporting patients and other health care professionals involved in their care. Pregnancy planning is discussed at pre-bariatric surgery education groups and assessment clinics. 1:1, individual advice is also offered after bariatric surgery. The service encourages women to contact us when planning pregnancy and upon knowledge of pregnancy so that we can provide up-to date information and offer dietetic support. The bariatric surgery service takes referrals for bariatric surgery from across the South West of England. The routine post –operative dietetic care for those that have not come from our local tier 3 weight management service is handed back to local services after ~6months post op. However, we continue to provide guidance/support for these patients and our colleagues re. pre-conception/pregnancy as requested.
Background/context	Weight loss in women with obesity can improve fertility. It can also reduce the risk of pregnancy complications that are linked with obesity. However, there may be health risks associated with having a baby after weight loss surgery. If pregnancy occurs soon after bariatric surgery, during a phase of rapid weight loss, food and nutrient intake may not be as good as normal. Nutritional deficiencies can affect the foetus (for example folic acid deficiency can cause neural tube defects). There is also an increased risk of preterm delivery, having a small baby and an admission to neonatal intensive care. We advise to avoid pregnancy in the first 12-18 months after bariatric surgery and when weight is unstable. We inform women of the considerations for contraception methods following bariatric surgery: There are concerns that the oral contraceptive pill may not be absorbed after a gastric bypass and sleeve gastrectomy thus the injection, coil or implant are

	more reliable forms. Individual considerations by a family planning expert are needed for the suitability of these methods in relation to weight. Vomiting is not normal after a gastric band, but patients are also reminded that this will impact on the reliability of the oral contraceptive pill. After bariatric surgery patients are routinely advised to take specific daily micronutrient supplements and to have regular nutritional monitoring in the form of blood tests. This advice changes when planning and during pregnancy and when breastfeeding.
Approach/methodology	Our consultant endocrinologist attends antenatal clinic and sees women using antenatal services at Musgrove Park Hospital who have had bariatric surgery. This is at any time point post operatively. The consultant informs the bariatric dietitian of the patient who contacts them by phone to offer education. This includes micronutrient supplementation, nutritional monitoring, food safety, dietary intake and weight. Supporting written information is also sent to the patient and GP, this includes a copy of our leaflet “Preparing for and managing pregnancy after bariatric surgery“. This contains general and bariatric considerations about food and activity. Due to limited capacity the bariatric dietitian does not attend the antenatal clinic but offers patients further contact for education/dietetic assessment/review 1:1 in the bariatric dietetic clinic either face to face or by telephone. A diabetes dietitian does attend the antenatal clinic and will see patients as needed, offering first line dietetic advice and referring to the bariatric dietitian as appropriate. If requested, bariatric dietetic support can continue post-partum for women who were in the local tier 3 weight management service. The bariatric dietitian has recently been involved in a pilot of a shared medical appointment (with me as the dietitian, cons endocrinologist, GP, paediatrician, pharmacist and health visitor) focusing on pre-conception care. This generated ideas for future services/initiatives within Somerset.
Results and evaluation	We keep a database of pregnancies in women who have had bariatric surgery, so far we have collected data on ~50 over the last 5years (we have 3500 deliveries/year).

	A research dietitian examined the nutritional supplementation practices of pregnant women from our centre, this was presented as a poster “Nutritional supplementation during pregnancy in women post metabolic surgery: A case series from a UK regional centre” at UKCO (UK Congress on Obesity) in Newcastle in August 2018.
Key learning points and top tips	Considerations after bariatric surgery during the maternity care pathway are not widely known so it is essential to continue to raise awareness amongst patients and health care professionals. “Nutritional supplementation during pregnancy in women post metabolic surgery: A case series from a UK regional centre” poster conclusion: *“The majority of women who became pregnant after metabolic surgery did not meet the recommendations regarding nutritional supplementation when first seen. This raises the importance of targeted preconception advice and services for this high risk group. Prospective research, which includes dietary and biochemical data will allow better understanding of nutritional status and risk during the preconception and pregnancy period, following metabolic surgery.”*
Plans for spread	The bariatric dietitian and consultant endocrinologist sit on an international interest group for bariatric surgery and pregnancy research and provide expert opinion. Our bariatric nutritional guidelines are available on our internet site. A summary including pregnancy related nutritional supplementation and monitoring guidelines are attached to all routine bariatric dietetic clinic letters for patients and their GPs (in the standard pathway, patients see the bariatric dietitian three times). This summary is also frequently used in correspondence by other members of the MDT.
Examples of material produced/resources used	Patient leaflets: • Vitamin and mineral supplementation and monitoring: Bariatric Surgery” • “Preparing for and managing pregnancy after bariatric surgery“ • “Planning pregnancy and your weight” Local guidelines:

	• “Guidelines for the supplementation and blood monitoring of bariatric surgery patients” Local app: HANDi Maternity Musgrove Park Hospital App Sign posting to further information/support: www.nhs.uk www.nhs.uk/start4life www.somersettalkingtherapies.nhs.uk
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Colostrum harvesting in gestational diabetes to promote breast feeding and prevent hypoglycaemia.

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	Colostrum harvesting in gestational diabetes to improve maternal and infant outcomes
Background/context	Infants of women with diabetes in pregnancy are at increased risk of hypoglycaemia, admission to a neonatal intensive care unit (NICU), and not being exclusively breastfed. Encouragement and support of women with diabetes in pregnancy to express and store breastmilk in late pregnancy can help overcome these risks.
Approach/methodology	Diabetes and Antenatal Milk Expressing [DAME]): a multicentre, unblinded, randomised controlled trial.
Results and evaluation	**Infant benefits:** Promotes exclusive breastfeeding. Reduced risk of Term NEC. Breastfed Infants have a reduced risk of childhood diabetes. Encourages passage ‘meconium’ which reduces the risk of jaundice. **Maternal benefits:** Promotes establishment of breastfeeding and reduces likelihood of infant formula top-ups. Reduced insulin needs of mothers who breastfeed.

	Breastfeeding reduces risk in mothers with gestational diabetes you are less likely to go on to develop diabetes in later life.
Key learning points and top tips	There is no harm in advising women with diabetes in pregnancy at low risk of complications to express breastmilk from 36 weeks' gestation.
Examples of material produced/resources used	WWL NHS resource University of South Hampton resource
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Enhancing recovery of women likely to undergo elective caesarean section: The evolving role of the dietitian and AHP's

Stage of maternity care pathway where good practice is focussed	Antenatal Intrapartum Post-partum
Summary description of the initiative	Early nutritional assessment and nutritional management of pregnant patients show economic and patient benefits. In high-risk pregnancies, these services can initiate and optimise early recovery programs (ERP) to extend the service and manage high-risk patients. Furthermore, with audits and tracking in place in EMR, the service can produce real-world evidence to support the development of Enhanced Recovery After surgery (ERAS) in C-section protocols in current populations that are excluded (gestational diabetes) but would benefit from this intervention. Dietitians should form part of the core leadership team to lead further expansion of ERAS as adopting ERAS challenges current practice. In gynaecology, dietitians can be the vital link between maternity and neonatology to ensure continuity of care but also ensure benefits for both infant and mother.
Background/context	Enhanced Recovery After Surgery (ERAS) is an improvement program that is evidence-based to improve outcomes in surgical patients. Implementation of ERAS programs results in major improvements in clinical outcomes and cost, making ERAS an important example of value-based care applied to surgery.[1] ERP's offer safe, high-quality patient pathways and should become golden standard for all women undergoing c sections. The pathway offered benefit to both patients and the NHS through cost savings from reduced complications and decreased the length of stay.[2] Enhanced Recovery After Surgery (ERAS) is a paradigm shift in perioperative care, that is changing worldwide practice and receiving much attention in various areas of medicine. The

	elements of the patient pathway are proven to blunt the metabolic stress response due to surgery (example hyperglycaemia) to attain faster remission to anabolic homeostasis.[1]
Approach/methodology	Review of clinical protocols and systematic reviews. [3] Feedback from NHA Enhanced recovery pathway. **Retrospective cohort study**[4] **Anaesthetists' Association survey & feasibility study from a single unit Queen Charlotte's Hospital, Imperial College Healthcare NHS Trust** Consensus/agreement pathway - **Enhanced Recovery in Obstetric Surgery King's-EROS working party** **Case-control studies:** Patient experience survey's[5]
Results and evaluation	**Infant benefits:** • Promotes the establishment of breastfeeding and skin-to-skin.[5] • Quicker to establish breastfeeding resulting in quicker discharge.[5] **Maternal benefits:** • Improves mothers birthing experience, more family centred, less stressful, better bonding and better breastfeeding success rates.[5] • Mothers get better sooner, hence supporting infant practices that promote better outcomes such as breastfeeding and skin-to-skin contact. • Earlier discharge, to support the care of siblings at home and integration of new family member. • Promotes the establishment of breastfeeding and reduces the likelihood of infant formula top-ups. • Improved maternal satisfaction and more positive feelings toward the relationship with the new born.[5] • Improved maternal confidence to care for infant.[5]

Socio-economic

- Reduces the length of hospital stay by 30% to 50% and similar reductions in complications.
- Reduced rates of readmission.
- Reduce care time by 30%. Increasing compliance with the ERAS protocol correlated to decreasing nursing workload.[4]
- Minimal investment required for the successful introduction of ER – needs ERAS AHP champions.[2]

Key learning points and top tips

1. AHP (Dietitians and physiotherapists) have vital roles in this initiative.
2. Dietitians have a crucial role to implement and set-up the nutritional protocols and SOP to dispense nutritional supplements in this pathway.
3. Dietitians also have the knowledge to support high-risk patients (GDM)[6–9] who are currently excluded but can benefit most from this pathway. Supporting initiatives such as colostrum harvesting[10] can help overcome gaps in care for the macrosomia infant[11] and ensure better parental participation and reduce neonatal distress due to parental absence[4,5].
4. Dietitians will be able to identify knowledge gaps in this pathway to stimulate future research to keep on expanding ERAS into other areas of care.

Examples of material produced/resources used

Enhanced Recovery Collaborative: Elective Caesarean Section

Enhanced recovery after

elective caesarean section

Information for women and birth partners

Enhancing Recovery of Women

Undergoing Elective Caesarean Section Workshop

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For further information

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Preventing Maternal Phenylketonuria Syndrome in the children born to women with phenylketonuria

Stage of maternity care pathway where good practice is focussed	Conception Antenatal Post-partum First year post birth
Summary description of initiative	Metabolic dietitians who work with adults focus on optimising the nutritional status of women with PKU before they conceive, throughout their pregnancy and afterwards when breastfeeding. *In areas of best practice, there is an extended role which dietitians are also adopting, and this is to support women with PKU in managing their own sexual health and fertility so that unplanned pregnancies are minimised in this group of women.*
Background/context	The Maternal PKU Syndrome has the following outcomes for the baby: microcephaly, mental retardation, cardiac defects, spontaneous abortion and low birth weight (<2500g). The target for metabolic control is significantly stricter than for other groups within the PKU population – so the diet is much more restricted, however meeting nutritional demands of pregnancy means constant monitoring and adjustment to nutritional intake for the woman.
Approach/methodology	Metabolic dietitians take the following approaches: 1. Monitoring a woman's phenylalanine (phe) levels two -three times weekly preconception 2. Manipulation of diet to achieve phe of 120-250umol/l which likely involves reducing phe intake to the equivalent of 3g natural protein or 1 slice of bread a day. This control continues until delivery and nutritional intake adjusted several times a week to maintain foetal growth and development.

3. Protein substitute (medication providing protein minus phenylalanine) type and dose is reviewed preconceptually – these products very often provide all micronutrients needed – folic acid, DHA, iron, calcium etc.

4. Low protein prescription foods must be accessed for the woman – on natural protein intakes as low as 3g/day a large % of carbohydrate needs are met by prescription only foods.

5. The effects of hyperemesis on calorie intake, during the first trimester must be minimised by close liaison with the patient and rapid use of anti-emetics/rotation/introduction of increasingly powerful anti-emetics to reduce symptoms as much as possible.

6. Assess pregnancy progress with clinical, radiological (foetal growth), nutritional and biochemical information throughout pregnancy.

7. Ensure nutritional needs are met during and immediately post-delivery in the maternity unit; request early new born screen of baby.

8. Support after birth with detailed nutritional advice for breastfeeding and ways to maintain own self care for PKU whilst being a new mother.

9. Ongoing monitoring of maternal and child outcomes e.g. head circumference post birth.

Results and evaluation

Delivery of best practice, evidence based, and patient centred care is still evolving.

Key learning points and top tips

1. Women with PKU are asked to follow an extremely restricted and complex diet from before conception – this places many practical and emotional demands on them and support and encouragement is needed throughout pregnancy
2. Women with PKU need very close monitoring and intensive treatment of hyperemesis which can lead to raised Phe levels through catabolism, in the first trimester.
3. Women with PKU need foetal echocardiography and more frequent foetal growth scans and obstetrician-led antenatal care is the best way to achieve this.
4. Women with PKU can give deliver babies with no complication as their metabolism can withstand the metabolic stress of labour and uterine involution.

5. Women with PKU post-partum need additional support to a) eat and drink sufficiently to support breastfeeding and b) manage their own blood phe levels to maintain cognition and optimal mood so they can also care for their new baby.
6. PKU is an inherited disorder. The baby of a woman with PKU may have new born screening for PKU earlier than usual. Women with PKU are sensitive to comments made by midwives/health visitors when testing their baby as it is for a disorder they themselves have (and this may be unknown by the professional doing the test).
7. High phenylalanine levels can cause low mood and cognitive issues and mothers will need additional support after the baby is born to help with the diet and maintaining good metabolic control and optimal mental wellbeing.

Plans for spread

Best practice involves:

1. Young women with PKU receiving patient-centred sexual education and counselling specific to PKU delivered by multidisciplinary metabolic teams.

2. All women and girls with PKU, of any age, receiving regular metabolic follow up at a specialist centre

3. All women with PKU who preconception are, pregnant or post-partum, receiving care at a specialist metabolic centre.

4. Peer support events for all age groups of women with PKU and their parents or partners, to ensure patients can endure the demands of PKU preconception and pregnancy. Metabolic dietitians working with adult patients take the lead in organising patient events.

Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)

Sally* wanted to become pregnant and liaised with the metabolic team who she sees for her PKU, about what special measures were needed.

Preconception Diet:

Sally achieved metabolic control within the target levels for conception in less than 4 weeks, her metabolic team suggested she could stop using contraception. At this stage Sally was taking an ultra-low protein diet – she was allowed just 200mg phenylalanine or **4g natural protein a day**:

E.g.

Breakfast: 2 phenylalanine exchanges of Rice Krispies (30g) and prescribable low protein milk

Cup of tea with low protein prescribable milk

Orange Juice

Mid-Morning: banana

Lunch: vegan (low protein) cheese toastie made with prescribable low protein bread

Mid-afternoon: protein free sweets – skittles

Evening meal: prescribable low protein pasta, roasted vegetables and tomato sauce, 35g sweetcorn;

38g Carte D'or ice cream with low protein meringue nests

Pregnancy:

6 weeks after contraception was stopped, Sally rang her metabolic team to say she suspected pregnancy: it was confirmed later that week at her emergency metabolic clinic appointment.

Sally was referred for Consultant-led obstetric care with a request for close foetal monitoring with a foetal echocardiogram and regular growth scans, in addition to the routine dating and foetal anomaly scans.

12 & 20 weeks: foetal anomaly scans

13 Weeks: routine dating scan

20 weeks: foetal echocardiography

24/28/32/36/40 weeks: growth scans

Sally continues sending 3 bloodspot cards to the path lab weekly. Each time a blood spot phe result is <150umol/l (target is 120-250umol/l) then Sally needed to increase her phenylalanine or natural protein intake.

Combatting sickness was essential, Sally used Cyclizine, prochlorperazine and then ondansetron.

By 26 weeks of pregnancy Sally was allowed 22g of natural protein and her diet contained less prescribable low protein foods, but it is still highly restricted.

Breakfast: A 40g bowl of Shreddies or Oatmeal porridge (45g oatmeal) made with prescribable low protein milk; banana; cups of tea with prescribable milk

Lunch: 5 Wheat crackers with vegan/low protein cheese; cherry tomatoes; peach; orange juice

Mid-afternoon: 1 scoop Ice Cream in wafer cone

Evening meal: 60g baked beans, 50g coleslaw with 240g of jacket potato

Evening Snack: Fry's Peppermint Cream bar; 25g bag of toffee popcorn

60mls cow's milk at night – other days has more - volume according to how many exchanges have been consumed and counted up in the day and how much more protein is needed.

Delivery:

Sally delivered with minimal medical intervention. Sally took low protein snacks into the maternity unit with her, so she could maintain her calorie intake to support breastfeeding.

Post-Partum:

Ongoing dietetic support soon after birth was important for Sally to enable self-care and good metabolic control, and this in turn has helped her look after her new baby better.

Sally discussed her post birth contraception plan with her team so that any future pregnancies could be planned as well as this one.

*not the patient's actual name.

Examples of material produced/resources used

www.nspku.org Publications/Maternal

Vitaflo International Ltd "A Practical Guide to Maternal PKU"

European Guidelines for Diagnosis and Management of Phenylketonuria,

van Wegberg et al. Orphanet Journal of Rare Diseases (2017) 12:162

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Use of pasteurized human donor milk (PHDM) in a community setting

Stage of maternity care pathway where good practice is focussed	Antenatal First year post birth
Summary description of initiative	As our breastfeeding support for mothers and babies in the community improved and maintenance of breastfeeding improved as a result, mothers began to complain that breast was being promoted as best yet if they did run in to problems the first things health professionals suggested was supplementary feeds of formula in a bottle.
Background/context	Community dietetics therefore put together a business case to request funding for PHDM and nursing supplementors to be used in the community for breastfed babies faltering to grow in order to maintain exclusive breastmilk feeding.
Approach/methodology	Funding provided – trialled for 2 years offering PHDM using a nursing supplementor to breastfed babies faltering to grow where there was an agreement that exclusive feeding at the mothers breast was likely to be achieved within 4-6 weeks.
Results and evaluation	Significant proportion of mothers achieved exclusive breastfeeding following use of PHDM whilst they worked to increase their milk supply
Key learning points and top tips	In community clinical practice anecdotal evidence shows that most breastfed babies faltering to grow are able to achieve full nutritional requirements form their mothers' breast with the right support for the mother to increase her milk supply and the right support to ensure effective attachment of the baby to the breast in order to drain the breast well.
Examples of material produced/resources used	• breastfeeding pathways for health visitors as to what care they should provide for a breastfeeding mother and when and who to refer on to for additional support. • Increasing maternal milk supply pathway – how to increase maternal milk supply and when to refer to dietetics for further support

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4.4. Drama therapists

Description of the role of drama therapists in the maternity care pathway	Settings where drama therapists work
During the post-partum period: • Drama therapists in some areas lead 12-week long postnatal therapy groups for mothers with postnatal depression. Mothers are referred by GPs and Health Visitors and have an Edinburgh Post Natal Depression Scale (EPDS) score of 13 or over. Sessions involve a combination of creative arts activities and group discussion around issues from conception, through birth to early motherhood. Family dynamics, relationship and body image issues are also covered. **Up to one year post birth:** • Mothers can attend post-natal therapy groups (as mentioned in post-partum) up to 2 years' post birth.	Community settings. Some groups funded by a charity, some funded by the NHS.

4.5. Music therapists

Description of the role of music therapists in the maternity care pathway	Settings where music therapists work
During the antenatal period: • Music therapists work within the antenatal clinic providing live music and therapeutic support in the waiting area during the busiest points in the week for women, their families and staff as a way of improving the experience of the environment. They tailor the music they play according to what is happening moment by moment. This includes: - Listening to stories about becoming pregnant, being pregnant and forthcoming labour - Listening to stories of families and lives - Interweaving of contact, includes others playing (particularly children) - Supporting and encouraging parent / child contact through musical interactions - Supporting and encouraging bonding between parent / foetus through music - Supporting staff through musical moments - Creating a listening, responsive, musical environment • Music therapists provide music for women who are hospitalised during pregnancy. Hospitalisation during pregnancy is understood to potentially contribute to anxiety, social isolation and low mood. Live music is offered across clinics and wards and is tailored to suit places, people and events. This includes the many areas covered above as well as: - Encouraging parent / parent contact in talking, sharing stories - Moments of staff / parent contact through musical moments - Supporting staff through musical moments	Antenatal clinic within an acute hospital Antenatal ward

- Specific input is provided for longer stay women and families across antenatal and post-partum. This is more tailored and involves seeing women week by week, talking about music for them and their baby, and ensuring they have access to the music they want.
- Women are sometimes admitted antenatally to the unit (from 37 weeks onwards). In these cases, there is work with the mother to support her to bond with her baby in utero, to talk to and sing to her baby, and give her information about how her baby can hear her and is already responding to her and what she can do to support their attachment.

During the post-partum period:

- When women have been hospitalised, the music therapists 'follow' them as they move from ward to ward, offering contact after discharge if necessary, and occasionally in a neonatal intensive care unit as appropriate. The music facilitates opportunities for people to have social experiences and 'normal' human contact and conversations in spaces where the social aspect of everydayness might not be a priority. They might be exactly what are needed to make the experience manageable and even pleasurable and memorable. This is particularly the case for family members – at a time when emotions can feel overwhelming, the music can provide emotional and psychological support. It can offer a sense of sanctuary, escapism, relief, comfort, distraction, joy, acknowledgement amongst many other feelings.
- Babies are admitted to the special care baby unit following premature birth, or complications at or following birth. Often at this time babies are in incubators and oxygen dependent, with parents unable to hold or touch their babies except fora prearranged time and with support from staff. At these times the music therapist offers emotional support to parents, tries to contain their anxiety and offer them a space to talk about their experiences and give them information about ways they can support their baby via their voices and offer white noise in the form of an ocean drum as an option to both engage and soothe their baby, as well as singing accompanied by guitar if appropriate. The music therapist will also explain to them about how responsive their baby is to physiological signs and how if they can regulate their own heartbeats their babies will match this.
- Babies identified as having a life limiting or life threatening condition might access the hospice straight from hospital as part of their step down care prior to going home, to enable families to familiarise themselves with medications and routines. They might also come to the hospice for end of life care, where families can spend the last few days with their baby. Music therapy might be

Post-labour post-natal ward

Inpatient mother and baby unit for women with pre, peri and postnatal mental illness.

Special Care Baby Unit (Level 2)

offered to families in these situations to enable them to build positive memories of their time with their child, as an opportunity to do something normalising together as well as a chance to experience the healthy part of their child, as music is often so motivating even for very sick children.	Children's hospice
Up to one year post birth: • Groups are provided jointly with other AHPs such as physiotherapists, occupational therapists and speech and language therapists and other healthcare professions to support health promotion e.g. Shake, Natter and Roll, is a collaborative, multi-disciplinary approach which uses the skills of a music therapist, occupational therapist, physiotherapist and health visitor within children's centres.	Community based groups within children's centres

Good practice examples – Music therapists

Music While You Wait (MWYW): music therapy in maternity services at Chelsea and Westminster hospital

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	Music therapy at Chelsea and Westminster is well-established within the Cheyne Child Development Service. It provides assessment clinics for children, and integrated packages of individual and group therapy for children who have profound developmental, communication, social and emotional needs. We also run outreach and intervention services in the community. The maternity service at Chelsea and Westminster is one of the largest in the UK, managing around 12,000 births every year. Natural birth is promoted, and care is midwife-led and supported by doulas. The service aims to support women throughout their pregnancy and labour – 24 hours a day, seven days a week. In 2015, it was announced that a major review of maternity services would be undertaken as part of the NHS Five Year Forward View. The scope of the review was to assess current maternity care provision and consider how services should be developed to meet the changing needs of women and babies. The findings from the review were published in February 2016, and seven key priorities were highlighted by Baroness Cumberlege to help drive improvement and ensure women and babies receive excellent care where they live. These priorities form the backbone of the 'Better Births' campaign and are at the heart of the care offered within maternity services at Chelsea and Westminster. It is into this context that this project sits. Following detailed discussions with stakeholders, and with supporting charitable funding, it was decided to offer a pilot project bringing music therapy into maternity services. Given the innovative nature of the project, the overarching

	aim has been to complete a thorough exploration of the potential role of music therapy within the maternity services at Chelsea and Westminster.
Background/context	In 2016, the music therapy service received charitable funding for a pilot project in maternity care within the Trust. The funders, together with partners in music therapy and maternity care wanted to explore how music therapy, within a hospital setting, might support women through pregnancy and in the early days with their baby. This one day a week project had two strands of activity. Firstly, extensive discussions were held with as wide a range of interested parties as possible. This enabled us to understand experiences of maternity services, both from women, families, and staff, to learn about some of the current challenges and opportunities in maternity care, and to talk about the part that music plays in supporting pregnant women and those around them. Secondly, we translated what we were learning into preliminary offers of music therapy in what emerged as key areas in maternity care in the Trust.
Approach/methodology	Weekly presence on Tuesday mornings: Live music tailored to suit people and place Contact with people (including women, partners, grandparents, children, staff).This takes many forms – Listening to stories about becoming pregnant, being pregnant and forthcoming labour o - Listening to stories of families and lives - Interweaving of contact, includes others playing (particularly children) - Supporting and encouraging parent / child contact through musical interactions - Supporting and encouraging bonding between parent / foetus through music - Supporting staff through musical moments - Creating a listening, musical environment Weekly presence on Wednesdays and Thursdays
Results and evaluation	**Outcomes for women** • Involvement – women playing as part of the delivery of the project which, in some cases has led onto other opportunities such as playing at the Whose Shoes event,

participating in the BAMT conference, being interviewed for the Evening Standard, and taking up a volunteering position within the hospital.

- Continuity of care – women have reported experiencing a level of continuity of care through the project which is unlike anything else they have come into contact with before. This has influenced their experience of the maternity service and been crucial in shaping the project.
- Experience new and unexpected roles – for some women who have come into contact with the project, they have subsequently become involved in often unexpected ways. For example, playing music on the wards, or being part of a round table discussion at a conference. Women have told us that they have appreciated being able to contribute to improving maternity care. At times, this has enabled them to retain an identity other than that of a mother. This has seemed important particularly at a time when there might be a sense of loss of identity or self.
- Empowerment and enablement – linked to the previous outcome, these are valuable and significant experiences for women, particularly at times when they may be feeling disempowered due to being pregnant or a sense of lack of control, generally, or specifically relating to interventions being 'done' to them.

Outcomes for babies

- MWYW facilitates greater awareness of the role of music in supporting child development and wellbeing.
- On the post-natal ward, MWYW waits provides opportunities for bonding between parents, babies, and family members.
- MWYW offers babies exposure to live music shortly after birth.
- MWYW offers opportunities for parents and carers to explore the use of music to sooth, calm, stimulate and communicate with their baby.

Outcomes for families

- Support for family members – Dads, siblings, grandparents. At a time when emotions can feel overwhelming, the music can provide emotional and psychological support. It can offer a sense of sanctuary, escapism, relief, comfort, distraction, joy, acknowledgement amongst many other feelings.

- Roles – at a time when new roles are emerging with the arrival of a baby, the music supports in a variety of ways with adapting to those roles

Social opportunities – the music facilitates opportunities for people to have social experiences and 'normal' human contact and conversations in spaces where the social aspects of everydayness might not be a priority, but they might be exactly what are needed to make the experience manageable and even pleasurable and memorable.

Staff (maternity staff) - MWYW:

- offered opportunities to experience another role through active music-making, and as a result be seen in another capacity. This can be useful in removing unhelpful hierarchies or perceptions.
- has brought a positive change to the working environments for staff 'humanising the medical environment'.
- has provided opportunities for staff to engage with other services and disciplines within the Trust.
- has facilitated creative collaboration between: staff-staff, staff-women, staff-public
- has provided opportunities for staff to share their experiences through external platforms e.g. BAMT conference.

Outcomes for music therapists

MWYW:

- enabled the music therapists to work in other spaces within the hospital.
- have been enabled to work collaboratively and creatively with staff and women they would not have come into contact with in their regular roles.
- has enabled them to develop innovative practice and become knowledge seekers in this largely unchartered territory for music therapy.
- enabled them to contribute to the knowledge and evidence base for music therapy.
- enabled them to help raise awareness and understanding of music therapy within and beyond the Trust.

Outcomes for the music therapy service

- MWYW has directly raised the profile of the music therapy service at Chelsea and Westminster both within and beyond the Trust
- MWYW has facilitated the development of new and existing relationships within and beyond the Trust, resulting in a greater connection with the maternity community.
- MWYW has enabled the team to lead on developing practice that is being shared within and beyond the music therapy community.
- MWYW has increased the team capacity in the service resulting in more services to be maintained within the Child Development Services whilst expanding into another area within the hospital

Outcomes for environments and spaces

MWYW transforms spaces from purely clinical settings to much more holistic environments that can transform how care is delivered and experienced.

Having live music in settings within the hospital creates unexpected surprises for people coming into contact with the music therapists. It can take people out of their experience of waiting and enables them to have a different experience of their care.

Outcomes for the Trust

- MWYW is having a direct impact on staff wellbeing with many reporting an improvement of wellbeing when in contact with the project.
- Similarly, to staff, MWYW is having a direct impact on patients, who have reported higher levels of satisfaction / experience and care when in contact with the project.

MWYW is generating positive PR around innovative practice, patient care, and research

Key learning points and top tips

1. Having music therapy in the clinic changes people's experience of waiting 2. People have a positive response to the project 3. People have mind and body responses to the music 4. It makes people feel differently 5. It has an impact on mother and baby / sibling relationship 6. Music changes the environment

Plans for spread	During April – September 2018 we continued to: - Disseminate and share knowledge – with the music therapy profession, Chelsea and Westminster Trust, maternity sector, and #MatExp - Develop closer working relationships with the maternity teams at Chelsea and Westminster - Develop the profile of the project within the hospital community and beyond - Engage with the #MatExp community - Develop practice to gain further understanding around impact - Create a more established theory of change - Develop a research proposal - Work towards publishing the work, not only in music therapy journals but also midwifery and nursing journals / publications. Recommendations – ongoing and thinking into the future Continue with what we are offering and the way it's being offered in maternity and elsewhere, (based on the evidence gleaned from feedback) 'Person rather than radio'. Increase funding to over double the current provision to enable cross-site working 5 days per week. Increase resources, time and support to enable the service to develop in not only this area, but also other areas within the trust. Continue to listen and respond; ensure the stories of the people engaging with the project continued to be told and included – that their voices are heard, and this continue to be a person-led approach to improving maternity services. Ensure participation; ensure that women, families and staff continue to have a participatory role in the project. In doing so, the project remains in control of services users and the participatory emphasis allows them to articulate what they want and have direct involvement in shaping their service.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that	Different types of waiting can cause women to experience anxiety in a range of ways. For instance, a woman three months pregnant, waiting to see the cardiac doctor in the antenatal clinic may experience her wait quite differently to a woman who is eight months pregnant waiting for her weekly appointment with the diabetes nurse. These types of 'appointment'

you have gained the service user's permission to share. Quotes from service users are useful)	waits are quite distinct from the wait a mother and her family might experience when waiting to be discharged from the post-labour ward. How these different experiences present will be unique to each woman and their individual situation. For example, over the summer break when children are on school holidays, one feature that emerged as a result of having live music in the clinic was the role of children in co-producing the music with the therapist. Children, some as young as nine months, joined Grace at the keyboard, playing and singing. One little girl sang and played the alphabet song, much to the delight of everyone in the clinic. Afterwards, she received a warm round of applause; the atmosphere in the clinic had completely changed. People were relaxed and smiling and appeared to have forgotten where they were momentarily.
For further information	
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Mother-infant music therapy in an NHS inpatient unit for women with postpartum depression and psychosis.

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	Thumbswood is a 7 bed inpatient unit in Hertfordshire. Women stay on average for 7-8 weeks, but this can vary from 2 to 18 weeks. Babies up to a year old can be admitted with their Mothers. It is led by a consultant psychiatrist, staffed by psychiatric and paediatric nurses and healthcare assistants, a nursery nurse, a part-time occupational therapist, psychologist and music therapist. Mothers are treated with a mix of medication, psychological support, and sometimes ECT. Women are admitted experiencing; peri, ante and postnatal depression, anxiety and OCD, involving intrusive thoughts and compulsions; postpartum psychosis, involving elation and disorientation and postpartum PTSD following birth trauma or previous traumas, involving flashbacks, nightmares and physiological symptoms. Pregnant women can be admitted from 37 weeks. For some this is their first onset of mental ill-health, but many have a complex mental health history. Music therapy has been in place at the unit since 2012. Of the 18 Mother and Baby units in England, Thumbswood is currently the only unit with an established music therapy post.
Background/context	Postnatal depression occurs worldwide in between 10 and 20% of births. Symptoms can include feelings of hopelessness and despair as well as intrusive thoughts of harming the baby. Postpartum psychosis is much rarer, affecting 1 in 1000 births. Both are more prevalent in women with existing major psychiatric diagnoses, and pre-natal preventative admission to specialist perinatal units for these mothers is becoming more common.

Research has shown outcomes for children whose mothers experienced postnatal depression to be poor, with deficits in cognitive abilities, a higher predisposition to violent behaviour, higher rates of insecure attachment and a narrower range of vocalisations found across several studies compared with children who had not been exposed to PND. (Murray et al, 1996, Hay et al, 2001, Hay and Pawlby, 2003, Lyons-Ruth et al, 1984, Murray & Cooper, 1997).

Significantly Stein et al (1991) found that these deficits continued to be present regardless of the length of post recovery time, and more recent studies found the risk of psychiatric disorder to be 11 times higher with this population (Pawlby, Sharp, Hay, O'Keane, 2007) and the risk of depression to be six times higher (Gerhardt, 2004).

There is a wealth of research focused on the benefits of singing to babies, but more recently some research has focused on the benefits for the Mothers. Symptoms of depression have been found to decrease (Fancourt and Perkins, 2017), and singing enhanced face to face interaction for both postnatally depressed mother and infant (De l'Etoile, 2012).

Babies begin to hear in utero between 16-20 weeks. Infants less than 24 hours old have been found to discriminate between voices, responding to Mother's voice, then Father's, then a stranger's (Edwards, 2011). In another study babies in utero were read a short children's story in the final trimester several times a week by their mothers. Babies showed a strong preference for the story they had heard as oppose other similar children's stories (DeCasper and Spencer, 1986).

An ante and postnatal music study measured baby's brain responses to music played in final trimester. Babies recognised an adapted version of Twinkle they had been played in utero, at birth then again at 4 months (Partenen et al, 2013). Babies prefer their own mother's womb sounds to a recording of another mother and can synch their movements and heart rate to the recording of their own mother's sounds, but not to another mother (Righetti,1996).

Approach/methodology

On Thumbswood the role of the music therapist has evolved into a multifaceted one, including; creating a space to hold the baby in mind, helping a Mother to feel she has something to offer her baby, inviting mother and infant to observe each other, offering siblings

and partners a chance to be with Mum and baby in a safe, containing space and offering something ‘normal’ in an abnormal situation.

The women often experience feelings of loss, aloneness, failure, detachment and anxiety at their inability to meet their baby’s needs. They may feel anger, disorientation, lack of insight. They may fear asking for help, feel hopeless and unable to see a future, as well as guilt at their feelings and resentment of and rivalry with their baby.

Babies with unwell mothers may experience disorientation at a mismatch of tempo and may feel anxious and uncontained. They may avoid the face of their mother and/or others or have flat responses to interaction. They may feel ungrounded within their body and in space and not reach out to explore objects around them. They may not be not meeting developmental milestones. They may work hard to generate a response from their mother and continue to do so despite limited responses, or they may give up and withdraw.

Music therapy sessions on the unit take place with individual mother infant dyads, with multiple dyads in groups, or with partners and siblings within a family context. Sessions might involve a hello song to each mother and baby in turn, and nursery rhymes, in which mothers are encouraged to sing to and with their babies, to touch them and make eye contact, to notice and respond to their babies' responses. Instruments/objects of reference might be used as prompts for particular songs, and suggestions/requests from the Mums are taken and discussed. There might be a space for improvisation as well as talking and discussion, and we will end with a goodbye song.

During sessions I might match and mirror the babies’ responses, modelling the back and forth of interaction for the mum. If a woman is quite manic i.e. talking and moving very quickly, I may seek to slow her down to a tempo more suited to her baby via my music, deliberately mismatching and encouraging her to slow. Likewise, if a women’s tempo is too slow for her baby, I may seek to enliven the pair with more upbeat music.

To help women who struggle to soothe their babies I may provide an external rhythm for them to synchronise to. There is always lots of repetition to provide opportunities to practice interactions.

Results and evaluation

Attendance at the sessions is high – 56 of 50 Mums admitted in an 18 month period attended at least one session, with most Mums attending two or more.

Of 17 Mums surveyed on discharge;

- 100% of Mums reported that they and their babies found the group either ‘Very enjoyable’ or ‘Quite enjoyable’
- 100% said they would attend a similar group on discharge
- 100% said they would sing songs from the group elsewhere
- 50% said they felt closer to their babies after the session
- 55% said it had improved their confidence with their babies

Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user’s permission to share. Quotes from service users are useful)

Case Study

Michelle, 34, was Mum to Samuel, 10 months. Michelle was admitted to the mother baby unit following a slow decline in her mental health after Samuel’s birth. She had started to express that she didn’t feel safe outside, that she thought social services were watching her and thought she was a bad Mother, and that she didn’t feel that Samuel was hers.

Michelle was tearful and helpless on arrival – Samuel on the other hand was lively and engaging, seeking out adult attention and taking pleasure in playful interaction though he remained aware of his Mum’s presence, crying if she went out of sight. He regularly approached Michelle, following her around the unit in his walker and patting her knee and vocalising if he managed to catch her. If she went out into the garden, he would press his face up against the window, watching her until she returned, and it was clear that at some point earlier on in his young life he had experienced much more responsive care from her and had internalised this and continued to expect it. Initially she would respond to his advances via a look and sometimes a word of acknowledgement, though her face and voice remained flat and without affect.

A week into her stay I approached Michelle and asked if they would like to attend a session. She agreed that Samuel would, asking if she had to attend with him. I said I thought he might want her there and she reluctantly followed me to the room. Our first session took place with another Mum and baby of a similar age. This other pair experienced a very secure and positive attachment and the other Mum was very responsive to her baby without being obtrusive, and I thought observing this being modelled might help Michelle get back in touch with her earlier experiences of Samuel.

Michelle sat with her arms folded, her body angled away from the rest of us. Samuel was lively and active, exploring the room zealously along with the other baby. There was no expectation that Michelle would take part – I simply wanted her to have a chance to be with him. The other Mum clearly enjoyed observing the two babies together, laughing at their enthusiasm and exuberance, and several times I observed Michelle laugh too, later on in the session even making a song suggestion, though she spoke sternly to Samuel when he reached out to pat the other baby on the head, seeming to interpret his curiosity as aggression. At the end both Mums stood up – the other baby crawled to his Mum's feet and she picked him up. Samuel did the same and Michelle stared down at him impassively, eventually picking him up reluctantly to carry him out of the room when he started to cry.

As the days turned into weeks however it became clear that Michelle was isolating herself, both from Samuel and the other people on the unit. She avoided eye contact when approached and left virtually all Samuel's care to the nurses. The staff felt desperate and as if they were failing her, and it seemed as if this was an echo of Michelle's own feelings – it felt as if she had given up on being a Mum. Michelle had a real fear of losing her children, and her imposed isolation and avoidance seemed to be a way of protecting both her and Samuel from the impending separation and loss she was sure were to come. She was certain she was going to be declared an unfit mother, and who was she to argue? She certainly felt unfit.

When I returned the next week Michelle had deteriorated further, and this time I worked with her and Samuel individually, along with a nurse she had developed a trusting relationship with. Again, she was very reluctant to attend but did so when the nurse reminded her how much Samuel had enjoyed it. The nurse modelled playful responsive attunement to Samuel whilst I

provided a musical scaffolding, regularly trying to draw Michelle in via observations of Samuel. I commented when he looked at her, trying to gently communicate to her that he certainly didn't think she was failing. She remained isolated and impassive to Samuel, though a moment of connection occurred as we all laughed at the nurse attempting to play a cabasa.

When I returned following a week's absence I was surprised and pleased to see Michelle wearing makeup, chatting with the other Mums, and generally looking brighter than she had done previously. I greeted her and sat down beside her at the table. Her eye contact was fleeting but there was a new enlivenment in her responses. When the time came for the group Michelle had wheeled Samuel off in his buggy to try and get him to sleep so I entered the room with another Mum but left the door open should others want to join us. I was amazed when Michelle and Samuel appeared halfway through. The other baby wasn't yet crawling, and Samuel seemed to imitate this, also sitting still on his bottom and exploring within the range of his arms and compared to his activity levels in previous weeks I was astonished at how he seemed to adapt to his surroundings. Michelle seemed more relaxed – she sat angled towards us and took a bell that Samuel offered her. The other Mum commented on Samuel's motor skills and his blonde hair and Michelle responded positively. At the end of the session she gently removed a beater from him and he started to cry. Michelle picked him up to comfort him and he recovered quickly. She seemed emboldened by this, perhaps feeling she had something to offer him after all.

Prior to her discharge Michelle attended a final session with Samuel. Samuel was on the verge of walking by this point and she praised him as he tried to stand unaided. He was stronger, and he used a rainmaker to bang the drum hard, keeping time with my pulse. Michelle tapped along on her knee and I praised his sense of rhythm. She was pleased, commenting on how quick he was to learn things. I left a beater on the floor close to her and she picked it up a bit later, tapping along with him. Emboldened, I passed her the windchimes to hold whilst Samuel played them. He reached up to them and she smiled down at him, enjoying his enthusiasm. Michelle was still quiet, her responses still muted, and she continued to find eye contact very difficult, but it felt as if she had re-met her baby, discovering him once again and claiming him as her own.

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Music Therapy with a very premature baby – caring for the family

Stage of maternity care pathway where good practice is focussed	Post-partum
Summary description of initiative	Music therapy with a premature baby born at 27 weeks gestation and her parents in the context of a special care baby unit.
Background/context	Baby Lottie* was born at 27 weeks following a spontaneous, very traumatic labour. Following birth, she was very unwell, unable to breathe unaided or digest milk, and needing oxygen via a ventilator and nutrients via a long intravenous line straight to her heart. Both parents were extremely traumatised by the birth – Mum had a history of depression and panic attacks and was extremely tearful and anxious on the unit. I approached them shortly after Lottie's arrival on the unit to explain what I did and to see if they felt they would benefit from a music therapy intervention. Both parents were keen to engage.
Approach/methodology	I worked with Lottie and her parents weekly for the duration of her stay in the unit (approximately 9 weeks). During this time, I offered Lottie's parents space to talk about and reflect upon their experiences, something that wasn't possible to do with the nursing team or doctors due to workloads and time constraints. They described Lottie as an unplanned but much loved baby and talked about the shock of going into labour so early and how this was something they had never even considered could be a possibility. We talked about their own musical histories and the music they had listened to whilst pregnant. We took these themes and turned them into gentle lullabies that we would sing to Lottie as a threesome. As Lottie grew stronger, she could be observed responding to these, turning her head to watch or moving her limbs energetically. We played her white noise via the ocean drum to soothe her. Mum and Dad took some ideas away with them, singing to her at other times and seeming to feel that music was something she responded to, as well as something they could do for her.

Results and evaluation	Lottie made good progress on the unit and was discharged 9 weeks following her birth. The family eventually felt settled enough for Dad to return to work, and the last few sessions took place with just Mum present. Her increased confidence and lessened anxiety was visible. Lottie was noticeably more responsive to the music and Mum described how they used the familiar songs we had sung to both engage and soothe her.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	Feedback form quote: Q. Do you feel the music was beneficial to your baby? If so how? A. YES – it seemed to make her very calm and content, both during and after the session (it was also wonderful for us as parents) Q. Are there any other ways in which you feel music could support your baby? A. Unsure but we would be interested in any further music therapy options. We think this is a hugely valuable and beneficial.
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Music Therapy with a premature baby – caring for the family

Stage of maternity care pathway where good practice is focussed	Post-partum First year post birth
Summary description of initiative	Music Therapy in a neonatal unit
Background/context	Music therapy is well established at Haven House Children's Hospice. Provision began with a four hour a week post in 2009, increasing to an 8 day a week post shared by four therapists by 2018. Haven House Children's Hospice has a long-standing relationship with Whipp's Cross Hospital Neonatal Unit. A specialist neonatal nurse from the hospice visits the unit regularly, ensuring that any babies born with life limiting or life-threatening conditions that would benefit from hospice support are referred. Difficulties remained however around stigma surrounding the process, with nurses reluctant to suggest to parents that they and their baby may benefit from hospice support, and with misunderstandings around what hospice support might mean continuing to occur. In order to further develop the relationship between the two organisations and to reduce this perceived stigma, the idea of sending a music therapist from the hospice was floated. The therapist would work indiscriminately across the unit but be particularly available to families whose babies may end up meeting hospice criteria. As well as addressing the issues above, there were many other reasons to offer music therapy in the neonatal unit. There is a high mortality rate in the neonatal population. 80,000 babies per year are admitted to Neonatal Intensive Care Units (NNUs) nationally, with over 2,000 neonatal deaths from causes likely to require palliative care (Health and Care Partnership Analysis, 2007). 98% of neonatal deaths occur in an NNU setting (ACT, 2009). Research has shown that music therapy can help premature babies by stabilising the heart rate, increasing oxygen saturation levels, improving sleep and sucking reflexes, decreasing stress and reducing pain. Having a premature or unwell baby has been linked with an increased incidence of parental relationship breakdown and postnatal depression (Tahirkheli et al, 2014). Serlachius et al (2018) describe how parents are known to feel disempowered in the Neonatal Clinical area and may struggle to comfort both their child and themselves. Whipps Cross Neonatal Unit (NNU) cares for the local population of more than 270,000. 48% of residents come from a minority ethnic background and the borough is the 35th most

deprived in the country. The NNU services a maternity unit with just under 5,000 births annually, 10% of whom need Neonatal care.

The NNU is stressful and busy, at a time of anxiety and fear for parents. Babies may be separated from their parents and will often be placed in incubators, creating a further barrier to parent-child bonding and comfort. Some parents may not expect their baby to live and may find it difficult to emotionally connect with their baby as a result.

Babies can endure high levels of stress while in the unit, which can affect brain development (Smith et al, 2011). Premature babies have difficulty shutting our external stimuli and often spend long periods of time in light, as opposed to deep, sleep. This highly stimulated state is compounded by regular medical interventions from clinical staff.

Currently at Whipps Cross there is no on-site psychological support available for families on the NNU. Music therapy is able to offer parents a form of emotional support while formal referrals take place. Parents who have not recognised their own need for support, or who struggle to communicate, can be gently helped and supported by the therapist whilst on the unit.

Offering music to these babies promotes relaxation, self-regulation and deep sleep, preserving much needed energy. For their parents, music therapy can help them to manage stress and anxiety and build an emotional connection with their baby.

A therapist began attending the unit for half a day a week to offer music therapy to parents and their babies in November 2017. The therapist uses live music and sound to replicate the sound and environment found in the womb which supports the development of the premature baby, and tailors her musical support to music that is appropriate and relevant to the dyad/triad. She also educates mothers on the importance of speaking and singing to their babies, providing them with the materials and support to enable them to use their voices in this way.

When babies are referred to the hospice the therapist is able to continue to see them in that capacity, either at the hospice or as part of the ‘hospice at home’ provision, and families have remarked on how they appreciate the continuity of service.

Approach/methodology	Case study Baby Lottie* was born at 27 weeks following a spontaneous, very traumatic labour. Following birth, she was very unwell, unable to breathe unaided or digest milk, and needing oxygen via a ventilator and nutrients via a long intravenous line straight to her heart. Both parents were extremely traumatised by the birth – Mum had a history of depression and panic attacks and was extremely tearful and anxious on the unit. I approached them shortly after Lottie's arrival on the unit to explain what I did and to see if they felt they would benefit from a music therapy intervention. Both parents were keen to engage.
Results and evaluation	I worked with Lottie and her parents weekly for the duration of her stay in the unit (approximately 9 weeks). During this time, I offered Lottie's parents space to talk about and reflect upon their experiences, something that wasn't possible to do with the nursing team or doctors due to workloads and time constraints. They described Lottie as an unplanned but much loved baby and talked about the shock of going into labour so early and how this was something they had never even considered could be a possibility. We talked about their own musical histories and the music they had listened to whilst pregnant. We took these themes and turned them into gentle lullabies that we would sing to Lottie as a threesome. As Lottie grew stronger, she could be observed responding to these, turning her head to watch or moving her limbs energetically. We played her white noise via the ocean drum to soothe her. Mum and Dad took some ideas away with them, singing to her at other times and seeming to feel that music was something she responded to, as well as something they could do for her.
Key learning points and top tips	Staff training is crucial to the implementation and ongoing success of the work. The therapist offered training to nurses, doctors and consultants, and nurses have played a key role in introducing the service to parents and supporting them to participate.
Plans for spread	Plans are in place to develop the role, expanding to 1-2 days (funding dependant) and to incorporate a community aspect, where the therapist would follow families home following discharge from the unit and offer them sessions there should they require them.

Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)

Feedback from parents has been positive. Following discharge families are visited at home by a community neonatal nurse, who often feedback about parents speaking positively about their experiences of music therapy on the unit, and how it offered support at a very challenging time.

Parents are given a feedback form to fill in prior to discharge. Lottie's parents responded below:

Q. Do you feel the music was beneficial to your baby? If so how?

A. YES – it seemed to make her very calm and content, both during and after the session (it was also wonderful for us as parents)

Q. Are there any other ways in which you feel music could support your baby?

A. Unsure but we would be interested in any further music therapy options. We think this is a hugely valuable and beneficial.

Examples of material produced/resources used

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For further information

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4.6. Occupational therapists

Description of the role of occupational therapists in the maternity care pathway	Settings where occupational therapists work

During the pre-conception period:
• Occupational therapists provide counselling and advice to help women consider the implications of any known medical/physical/sensory impairment/mental illness (including medication) on pregnancy, birth and motherhood, and to anticipate the impact of role changes for them and their family.
• For women living with illness and/or disability, occupational therapists provide advice about role/lifestyle changes to support a healthy pregnancy including referring for a medication review where appropriate.
• They support for women who do not conceive, helping them to re-imagine their roles and identities as 'not a mother'.
• They offer advice upon the importance of meaningful occupation as part of a positive physical and mental health.
• They support women to access opportunities and support for social inclusion.
 	
During the antenatal period:
• Occupational therapists provide strategies (including pain and fatigue management, pacing, anxiety management), organising equipment, adapting activities and modifying the environment to reduce the risk of antenatal hospital admissions and to ensure the health and well-being of mothers living with illness and disability as the pregnancy progresses. In particular to enable mothers to:
  ○ Manage self-care activities (e.g. showering, cooking, mobility) as their pregnancy develops.
  ○ Continue to perform in the workplace; and to
	Hospital outpatient clinics. community clinics, patients' homes, Children's centres

    - Maintain healthy occupations including participation in exercise and in community/social activities.

- Help women prepare for a change in role, routines and occupations and manage their expectations of birth and motherhood, so reducing the risk of relapse and the need for specialist services after delivery.

- Help women whose functional performance has been eroded as a consequence of their physical or mental illness to plan and make practical preparations for their new baby e.g. shopping for equipment, adapting their home environment, planning routines for herself and her family.

- Explore strategies and arranging adaptations and equipment to enable parents (and other family carers) living with illness or disability to manage their new baby at home as independently as possible e.g. adapted changing tables, cots, pushchairs and organising bespoke adaptations (e.g. for wheelchair/buggy) if required.

- Through a process of task analysis occupational therapists work with parents/carers living with illness or disability to identify baby care activities that might present a challenge and practising techniques (e.g. adapted methods for lifting, carrying, feeding, dressing, bathing, changing and holding the baby) to build parents' confidence and ability to perform these effectively and safely.

- Support women to adjust to the lifestyle changes associated with motherhood by planning ahead to adjust their routines, for example to minimise lifting and handling.

- Identify the support required for mothers to care for an older child with additional needs whilst pregnant and when the new baby arrives (contributing to a Carers Assessment where appropriate). This may include providing equipment (e.g. an adapted buggy to accommodate the sibling and new baby) and moving and handling advice for bathing and bed transfers.

- Improve safety at home for expectant mothers with an older child who displays challenging behaviour by facilitating home adaptations, providing equipment and giving advice on behaviour

management and emotional regulation strategies to ensure the safety of the mum and her child(ren).

- Liaise with the midwifery team to ensure the needs of women living with illness and disability are understood and plans are in place to manage these whilst on the labour ward, during delivery and afterwards. This includes ensuring the ward environment enables the mother to fully participate in her baby's care e.g. provision of an adapted cot and planned support for feeding.
- Liaise with other agencies (e.g. social workers, housing and benefits agency, health visitors) to ensure appropriate support is in place to enable mothers to meet their baby's physical and emotional needs. This may involve securing respite care for siblings (including those with additional needs) during the mother's pregnancy and afterwards.
- Provide counselling/support to help women cope with possible negative attitudes and scepticism of others regarding their abilities as a mother living with illness or disability.
- Help women identify and establish social support networks that will provide support and reduce social isolation once their baby has arrived e.g. accessing Children's Centres
- Occupational therapists may work with children with additional needs to prepare them for the arrival of a new sibling using social stories and role play.

During intrapartum:

- Occupational therapists undertake relaxation and mindfulness therapy for expectant mothers with anxiety and fear of birth (tokophobia)
- They advocate on behalf of women to ensure their mental health, physical and learning needs are understood and supported during delivery
- Occupational therapists liaise with the midwifery team to ensure necessary equipment/adaptations are in place for a safe and dignified delivery e.g. hoist, adapted bed, wheel-chair accessible bathroom, communication aids.

During the post-partum period:

- Occupational therapists adapt activities and provide equipment for women with physical needs (including those acquired post-surgery/caesarean or following a traumatic birth) to enable them to carry out personal care activities including showering, using the toilet and transferring in/out of bed.
- Provide equipment, information and support to ensure women living with illness or disability have the confidence, equipment and skills to:
    - care for their baby including feeding, changing, bathing, transferring and carrying their baby (indoors and outdoors);
    - care for themselves; and
    - care for their family (including cooking and managing family routines) as safely and independently as possible.
- Provide support to help women balance their expectations with the reality of motherhood, adjust to role changes and develop a positive sense of identity as a mother.
- Support new mothers to structure their days/weeks and develop healthy routines for themselves, their baby and family that balance mothering occupations with mothers' own self-care/nurturing needs.
- Enable parental involvement in caring for a baby who has received surgical intervention, who may be in pain and who may rely on specialist medical equipment by providing equipment, adapting activities, and building self-efficacy through problem-solving. This may involve exploring ways to hold, support, feed and care for a baby and making environmental modifications to space, seating, privacy and sensory factors (light and noise) on the neonatal intensive care unit.
- Foster parent/infant attachment in neonatal settings by promoting skin-to-skin contact and helping parents read infant cues and use positive handling approaches.

- Enable parents of infants who are premature, disabled or unwell to support the baby's self-regulation, physical and sensory development by giving guidance on positioning and adapting the environment to modify sensory input and minimise baby's stress.

- Promote bonding/attachment/positive interactions between mothers living with illness and disability and their baby through individual and group therapeutic interventions such as Video Interactive Guidance (VIG) training, baby massage, sensory baby approaches and Rhyme Time to develop mothers' confidence, satisfaction and enjoyment in the mother/baby relationship.

- Contribute to risk and safeguarding assessments to ensure the safety and well-being of mother, baby and other family members.

- Provide individual and group therapeutic interventions in acute/community settings for new mothers (especially those experiencing mental illness) for skill development (e.g. cooking/baking), confidence-building, problem-solving, psychosocial support (e.g. creative activities), and stress/anxiety management.

- Enable parents to prepare for and manage the transition from hospital to home by providing information and equipment, liaising with other agencies and helping parents to adapt activities and routines to support the occupational needs of the baby, mother and other family members.

Through graded exposure programmes, helping mothers living with illness or disability access community groups/organisations/activities that can provide ongoing practical, social and emotional support when discharged from specialist services.

Up to one year post birth:

- Provide equipment, information and advice re pain management, joint protection, self-care and activity pacing to ensure the safety and well-being of mothers living with illness and disability and their babies.

- Counselling to reconcile parents' pre-conceived notions/expectations of motherhood with the reality. Exploring strategies, developing skills and building confidence to enable ladies to manage their

roles as a partner and mother and consider the impact of role change on the mothers' relationship with her partner and others/extended family members.

- Support mothers to develop healthy routines for themselves, their baby and family and identify solutions that enable them to provide practical and emotional care for their baby whilst still meeting the mother's own self-care/nurturing needs.
- Provide individual and group therapeutic interventions to promote mothers' physical health (e.g. exercise and sleep strategies), mental health (e.g. stress and anxiety management, creative activities), confidence and skills such as cooking (for pleasure, weaning and feeding the family).
- Occupational therapists provide Individual and group therapeutic interventions to promote bonding/attachment/positive interactions between mother and baby (e.g. using Video Interactive Guidance, baby massage, sensory baby approaches, Rhyme Time, role-modelling play and positive interactions) to develop mothers' confidence, satisfaction and enjoyment of the mother/baby relationship.
- Signpost to sources of community support and facilitating networks for mothers with similar needs and experiences for ongoing support.
- Through graded exposure programmes, helping mothers access community groups/organisations and attend child-focused activities that will provide ongoing practical, social and emotional support as well as providing structure/routine for the mother and baby.
- Individual graded exposure programmes to develop mothers' confidence in 'community skills' such as shopping and bus travel
- Provide guidance and support to enable parents to support the motor, sensory and cognitive development of infants who are premature, disabled or unwell through play opportunities that are appropriate for their individual needs.

- Facilitate a safe and timely discharge from acute settings through home and community visits and liaising with agencies including community-based occupational therapy teams, health visitors and social workers.
- Provide support for returning to work including childcare, housing and financial arrangements, adjustment to new/additional roles, help to balance new routines and develop a positive sense of identity as a mother and worker.

Good practice examples – Occupational therapists

Preparing for the new arrival

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	Providing discussion and practical sessions with the expectant mother, with right upper limb weakness following a stroke several years earlier, and father regarding managing a baby. This involved one arm techniques, problem solving, and home set up, also thinking about safe in relation to her lower limb weakness and reduced balance.
Background/context	This lady had been attending a joint therapist clinic for spasticity management follow a stroke resulting in right UL weakness and spasticity. Towards the end of the treatment period she informed us that she was pregnant and concerned about how she was going to manage.
Approach/methodology	Occupational therapy provided a session to discussion with the patient and her partner concerns about how she would management with the new baby. OT encouraged the patient to liaise with her midwife team early regarding her concerns so that a plan could be discussed for after the birth and help could be put in place immediately and that she should accept help from family members. During the session we discussed how her home could be set up e.g. setting up a changing station on the floor, clothing for the baby that would be easier for her to dress and we practiced changing the baby's nappy. She was then encouraged to practice techniques for changing, dressing and feeding the baby at home.
Results and evaluation	The patient and her partner stated they felt more confident about managing when the baby arrived and planned to discuss concerns with the midwife on their next appointment.

Key learning points and top tips	• Ensure enough time to discuss concerns • Make a list of possible issues/areas that may be a concern as new parents may not be aware of all the issues • Encourage the patient to discuss concerns early with the midwife team • Have props available for practical session e.g. doll, nappies, bottle etc.
Plans for spread	The service is offered as required at this stage.
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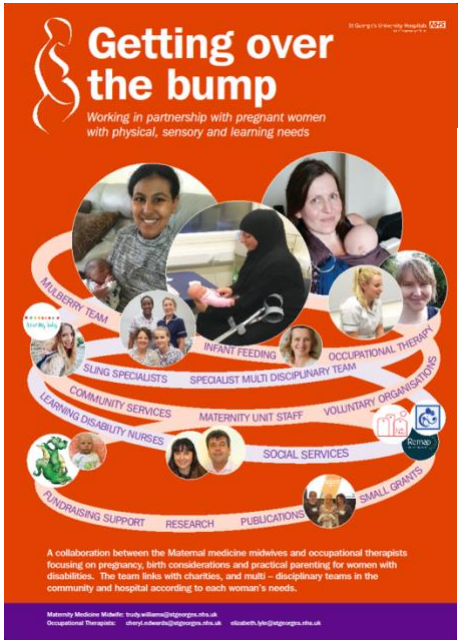
Getting over the Bump: A collaborative project between Maternal Medicine Midwives and Occupational Therapy

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum
Summary description of initiative	St. George's University Foundation Trust Maternity Unit assists nearly 5000 women to give birth every year. An innovative and collaborative service between OT and Maternal Medicine Midwives is currently being piloted to better address the need of pregnant ladies with pre-existing disabilities.
Background/context	Research estimates that approximately 9.4% of women giving birth in the United Kingdom have one or more limiting longstanding illness which may cause disability, affecting pregnancy, birth and early parenting (Redshaw et al., 2013). Whilst there is a paucity in the literature exploring the experiences of expectant mothers with disabilities, current research to date highlights a maternity gap in the service provision for these women using maternity services (Royal College of Midwives, 2005; Royal College of Nurses, 2007). Anecdotal evidence to support this is widely shown throughout social media where women experiencing difficulties are exploring other means of help they are not able to access through standard NHS healthcare provision.
Approach/methodology	Through early screening, women coming into pregnancy with a pre-existing physical and / or sensory disability will be offered a link into a collaborative ante-natal assessment by an OT and a Midwife. OT core skills in maximising independence are utilised in an innovative way to anticipate and address potential issues early in the pathway thus reducing later complications in physical, psychological, antenatal and postnatal care.

	Assessment explores enabling the expectant mother to care more independently for their child after birth – including transferring and carrying the baby (indoors and outdoors); feeding, changing, bathing and dressing the baby as well as strategies and equipment, which may be beneficial during the latter stages of pregnancy and delivery.
Results and evaluation	The pilot project has so far seen 10 expectant mothers through the joint Occupational Therapy and Maternal Medicine clinic. Information packs on the key areas discussed in the clinic are provided to the women as well as bespoke information on equipment, resources and organisations which may be useful. Links have been established with local Community & Social Services Occupational Therapy departments for assessment at home and equipment provision, as well as companies REMAP and DEMAND who make bespoke equipment for the mother's needs. Collaboration has also commenced with a local Baby Carrier/ Sling specialist and Mouse Magnets which supplies baby grows with magnetic poppers to the service for assessment. Links with local parenting resource Little Village have also been set up.
Key learning points and top tips	• Make connections with as many different professions/specialists as possible. • Make links with local charities and services. Set aside time to spread the word about the service and to increase people's knowledge on what the service provides
Plans for spread	• In-house education to occupational therapists, midwives and then other healthcare professions • Attendance to occupational therapy and midwifery conferences Increasing therapy time in the midwifery clinics
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that	Kate with fibromyalgia. Kate was referred to the service late in her pregnancy due to a late transfer of midwifery care. Kate had great difficulty attending her last appointment in the hospital due to her declining

you have gained the service user's permission to share. Quotes from service users are useful)	mobility, so a home visit was completed by the occupational therapist and maternal medicine midwife. Kate's mobility had greatly reduced during pregnancy. Prior to her pregnancy, Kate was able to walk around independently however due to increased pain and fatigue Kate was only able to transfer between a bed, chair and commode. Kate used to have a wheelchair, but this had been stolen. Within her flat, she was using a glide-about commode to move around. Kate had a flexible care package set up to meet her needs however nothing as yet had been confirmed for the care needs of her child. Poor sleep and fatigue are challenging in Kate's day to day life. The occupational therapist discussed various different techniques/strategies with Kate to try to manage her fatigue and pain when completing care tasks for her baby. Specific discussions were had about how to carry the baby between rooms with reduced mobility and for energy conservation. The service also put Kate in touch with a local charity that provides baby items such as a cot, buggy and sling to carry the baby. Kate was referred to her local wheelchair service for provision of another wheelchair and a charity until a long term wheelchair could be provided. A full discharge report with actions and recommendations was shared to her midwifery team as well as the adult and children's social services which ensured continuity of the recommendations and understanding across all parties.

Examples of material produced/resources used



For further information

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A range of approaches supporting families who have a child with severe and complex Autism when their mother becomes pregnant and/or has a new baby

Stage of maternity care pathway where good practice is focussed	Antenatal Intrapartum Post-partum First year post birth
Summary description of initiative	Improving safety at home for mums whilst pregnant (for example if a child displays aggressive behaviour) including liaison regarding adaptations to property/advice on behaviour management and emotional regulation strategies/provision of equipment at home to support calming; preparing the child for and reassuring them about the changes in the family; liaising with other services to ensure the appropriate support is in place for the family and older sibling during the pregnancy and when the baby is born/first few months.
Approach/methodology	Social Communication Emotional Regulation Transactional Support (SCERTS), Social stories/video modelling/sensory strategies based on Social intelligence (SI) theory.
Results and evaluation	Individualised depending on reason for intervention (for example - targets may be set that are monitored in school setting around playing with a doll/watching videos of babies; target may be around accepting a strategy in the home setting to support calming). Informal feedback from parents.
Key learning points and top tips	Many individuals with severe and complex autism can tolerate and cope positively with the significant change of family dynamic that comes with having a new baby sibling with the appropriate preparation and support in place based on the individual needs of the young person and family
Plans for spread	Offered as needed/requested by families of students at the school

Examples of material produced/resources used	Video social stories using baby doll - role play with child and family.
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Co-creation of a new perinatal service for mothers with mental health needs in Lancashire and South Cumbria.

Stage of maternity care pathway where good practice is focussed	Post-partum First year post birth
Summary description of initiative	Creation of a closed Facebook Group, (administrated by the Clinical Specialist for inpatient services) to gather the views of ladies who have experienced mental health services whilst pregnant or after having a baby, occupational therapists and professionals who have worked alongside occupational therapists to inform the development of a new perinatal occupational therapy service for women in Lancashire.
Background/context	Lancashire Care received funding as part of the Perinatal Mental Health Project to create a new Mother and Baby Unit and to develop community perinatal support. The aim is to develop an occupational therapy offer that is evidence-based and responsive to the needs of women with mental health problems.
Approach/methodology	The clinical specialist occupational therapist for inpatient services Kate Halsall contacted occupational therapists working in perinatal mental health and asked the library to carry out a literature search to explore the role and activities of occupational therapists working in this field. She also established a closed Facebook Group for women who have experienced occupational therapy as part of a perinatal mental health service, for perinatal occupational therapists and for other relevant professionals including the newly appointed ward manager for the Mother and Baby Unit. Kate posed questions, asking mums, therapists and other professionals to share their thoughts and experiences regarding activities that supported their mental health, transition from ward to home, support for returning to work and so on. Comments shaped the proposed design of the new services. Group members have been asked to evaluate the proposals and their thoughts and ideas used to influence the final implementations. Initial evaluation shows

	the mothers felt their contributions had impact upon the development of a number of aspects of the final service provision. Further research at a later date is required however to establish if the method has enabled a long term impact upon service user experience and clinical outcomes.
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Occupational therapy involvement in a mother and baby unit.
(West of Scotland Mother and Baby Unit, Leverndale Hospital, Glasgow)

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	The Mother and Baby Unit is a 6 bedded unit which covers the West of Scotland and works with woman in the perinatal period. The ward admits patients with their baby (up until the age of one). The ward offers an MDT approach which includes Occupational Therapy. OT interventions are offered to all patients during admission and can be used to assess the transition from hospital to home.
Approach/methodology	I was asked to carry out an occupational therapy assessment with a service user who had been admitted to the unit with her 8 month old son. The patient experienced a psychotic episode, and this affected her thoughts about returning to her home. An OT assessment was requested in order to assess her functioning with activities of daily living and included a home assessment. This informed that the service user was independent and safe in her ADL's (including her ability to care for her baby and older child) and hastened her discharge. There was also engagement with the service user's employer in order to assist in her return to work after a period of maternity leave.
Results and evaluation	POEM, emotional touchpoint cards (group intervention), Louis Macro Occupational outcomes: The patient has been able to set a return date for employment. The patient has been able to carry out her role as a mother and is now caring for her infant son and older daughter since discharge. Health and wellbeing outcomes: Improvement in psychotic symptoms. Relationship with family. Quality of care outcomes:

	Communication with other services- CMHT, Health Visitor Value of service to employer- facilitating discussion and plan to return **Overall return on investment** **Route 1- Care Delivered** OT x 3 sessions- 3 x £42= £126 CMHT contact- weekly 2 sessions-2 x £191= £382 Total= £508 **Route 2- Comparison of further admission of 2 weeks** Further admission £693 per day further 2 weeks- 14 x £693= £9702 Benefit claim (Income support)
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	Service user reported that she was "relieved to have help with her work" i.e. assistance with her employer as she was worried about sick leave or potentially losing employment.
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Occupational therapy involvement to assess and support a client in order to maximise safety and independence during pregnancy and as a new parent.

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	C referred herself to Occupational Therapy on 5th May 2016, following advice from her midwife. C has cerebral palsy. At the time of the referral C was 26 weeks pregnant.
Background/context	This was the first time I have assessed a client specifically relating to pregnancy and managing the role of a new parent. In preparation for the visit I took the opportunity to speak with colleagues who have had similar cases and researched some relevant journal articles including: Mothers with Arthritis, Child Care and Occupational Therapy: Insight through Case Studies Mary Grant The British Journal of Occupational Therapy, July 2001; vol. 64, 7: pp. 322-329. Mothers with Physical Disability: Child Care Adaptations at Home# Amy J. Wint; Diane L. Smith; Lisa I. Iezzoni American Journal of Occupational Therapy, September 2016, Vol. 70, 7006220060p1-7006220060p7. doi:10.5014/ajot.2016.021477 I also reflected upon my personal experiences of pregnancy and caring for a new born baby and used some task analysis to consider how CJs disability might impact on her ability to meet her goals firstly as a pregnant woman and then as a new mother.
Approach/methodology	28/06/2016. At this time C was 31 weeks pregnant. C is 30 years old and lives with her husband in a privately owned bungalow. Her husband is autistic. C is very close to her parents who are very supportive and involved. Cs needs frequently changed as the pregnancy developed and her physical ability reduced. New needs were identified once the

	baby had arrived. Goal setting was an ongoing process, but overall these were the main goals identified: **Goals:** To increase independence and safety with bed transfers To increase safety when showering To maximise independence and safety when mobilising To increase safety with access at front door (the above goals were initially identified during pregnancy. They were also relevant following the C-section delivery due to restricted mobility) To maximise independence and safety when caring for new born baby with support as required
Results and evaluation	**Actions:** Assessment and provision of bed lever (also tried mattress elevator which was unsuccessful). Assessment and provision of gantry hoist to aid transfer when recovering from C-section (gantry has now been removed) Assessment and provision of static horseshoe shower chair Referral to community neuro physio (which is now ongoing) Referral to technician service for grab rails at front access Advice and resources given re managing new born baby e.g. baby sling/carriers, bottle making machines, adapted changing tables/cots, appropriate pushchairs Referral to social work who have agreed 2 hours support per day to assist with C managing baby's needs. At the time OT involvement was closed Cs baby was approx. 6 weeks old.
Key learning points and top tips	During my involvement it became very apparent how little support there appears to be for pregnant mothers to be with a disability.

In this case C was referred to OT at a late stage, which meant that there was little time to prepare. C had been adamant that she would cope with support from her family and had declined assessment from social work colleagues.

Following the arrival of baby, it was quickly realised that additional support would be essential in order for C and her family to cope. Subsequently a referral to social work was made which has resulted in the arrangement of direct payments to fund a PA for 2hrs per day. Upon reflection a referral to social work before arrival of baby would have been far better in order to avoid undue stress at the time of baby's arrival. If a similar case is referred in the future this would definitely be considered.

There was no communication from Cs midwife during the pregnancy and the health visitor was reluctant to engage. From discussion with C and her family they received what they described as poor care during her admission to the labour ward and felt that staff had little or no experience with disabled pregnant woman. It appeared that a lack of knowledge meant that C received minimal support.

Again, involvement and support from the midwife/health visitor at an early stage could have been key in ensuring a better outcome and experience for C. Overall C was very grateful for my involvement and reported to me that it had been a real help and support during a very challenging time. At time of closure C was increasingly mobile with her tripod stick, was able to manage bed transfers with a bed lever, showering with the new shower seat, able to sit and feed baby, able to make bottle using the bottle making machine. Due to the limitations of the C-section she was still requiring support from family and was unable to be left alone with baby. She was awaiting the commencement of the direct payments to employ a PA. It is hoped this will give C more control over her babies care and also relieve pressure on family. She is also receiving ongoing specialist physio to maximise her mobility.

For further information	
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Keeping well post birth group

Stage of maternity care pathway where good practice is focused	Post partum
Summary description of initiative	10-week therapeutic group for mother's with infants under 6 months old. Crèche provided for infants and any older siblings under 5 years. Group runs for 1 1/2 hours. Then lunch is provided where children join the session
Background/context	Group was initially set up following successful bid to St Thomas Charity in 2008. Parental mental health team focuses upon supporting families living in Southwark with mild to moderate mental health concerns and the group aims to prevent deterioration by supporting and developing healthy coping strategies, reducing social isolation by promoting opportunities for women to meet others and gain sense of commonality and aid transition to parenthood through supporting bonding and attachment with infant and other significant support networks
Approach/methodology	The group is facilitated by 2 occupational therapists though the co-facilitator profession has varied as staff with the team change. Referrals are received by health visitors, midwives, GP, CMHT, social services, perinatal services, children centres, self-referrals and other local services Each person is assessed in the home environment before the group. Commitment to 10 weeks is stressed and an explanation of the use of a crèche is explained as babies do not stay in the group. No baby is left crying and crèche workers alert mother's when child remains unsettled so they can come and settle them. The sessions are provided using Set themes which have been developed over the years. External facilitators come into the group at various stages I.e. For yoga and a psychologist for the challenging negative thoughts session. The group is closed we accept 10 people (anticipating a slight drop out). People have to attend the within the first 2 weeks to retain a place in the group .

Results and evaluation	The last session involves an external person coming to the session to ask some focus group questions. The facilitators do not stay during this to enable freedom of speech though of course we see results. The feedback is generally very positive and has enabled us to slightly modify the group. Women like the opportunity to meet others, feel not judged, free to share their thoughts and feelings, develop skills, share leaning with each other and family
Key learning points and top tips	Highlighting importance of commitment to group is vital to help cohesion and therefore trust build within group. Recognising differences and individuality but also commonality regardless of background Crèche may be feared initially but valued greatly by most women by end. Having protected space to talk very important. Good relationship with crèche workers vital to ensure no babies left crying to build trust that we do want to support attachment. Lunch important to provided food in busy week when people find it difficult to look after themselves.
Plans for spread	There are no similar teams in other boroughs. Limited due to funding and staffing. Moderate to severe mental health seen as higher priority.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	Quotes from feedback in 10th session: "The crèche has been really helpful 'now my daughter flies with meeting new people', 'the children are used to other people'." "Not feeling that I was going mad, I really thought I was going mad but hearing other people's stories has been really therapeutic." "The summary [check-in at start of group] where everyone talks about their week helps you see so many parallels and helps with anxiety." "It is important to have someone to listen to you and it is easier to talk about stuff outside the group that before I had felt ashamed to talk about." "People don't judge and it helped me feel not alone or lonely. Outside people just try to advise but here they try to understand my brain a little bit." "People spoke about some horrible stuff but it was well managed by the group leaders who helped manage those hard feeling

For further information

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Good practice - The Tameside and Glossop Integrated Parent Infant Mental Health Pathway which includes perinatal /parent infant mental health care provided from Healthy Minds Tameside and Glossop.

Pennine Care Adult Mental Health Babies Can't Wait Agenda

Stage of maternity pathway where good practice is focussed	Conception Antenatal Intrapartum Post-partum First year post birth
Summary description of initiative	In Tameside and Glossop, we work in close partnership with each other on the pathway which includes obstetrics, midwifery, health visiting, adult mental health, early attachment service , child and family social care , the local women's centre and Home start. We have developed strong working relationships through having joint training opportunities and co delivering a rolling training programme to multi agency staff in the Tameside and Glossop area. We have joint group supervision and supervise/ provide consultation to one another. We also co facilitate a range of parent infant groups which support emotional wellbeing of parents and infants. This enables us to aim to provide a seamless and timely service to our parent and their infants and can instil a real sense of containment for our families in need as they see agencies working together to support them, In 2016 we introduced the Babies Can't Wait Agenda to Pennine care which encourages the perinatal frame of mind with equal attention on parental mental health, infant mental health and the parent infant relationship. All parents (mothers and fathers) from conception to 2 years post-natal are prioritised for assessment and treatment. All staff are expected to have basic

	training and understanding of the babies can't wait agenda. In Tameside and Glossop Healthy Minds We have been delivering the Babies Can't Wait training package since 2016 aiming that all clinicians attend this to develop their understanding of parent -infant mental health
Background/context	The integrated Parent Infant Mental Health pathway has been up and running since its initial development in 2009 and was evaluated and revised most recently in 2017. From this pathway we have introduced a CQUIN to Pennine Care based in the Babies Can't Wait Agenda. This promotes infant mental health and a focus on the parent infant relationship in line with the 1001 days critical period.
Approach/methodology	The pathway is based in a joint framework of theory. Although each discipline will have their own core professional approach All disciplines come together for joint training and supervision based in the following models and approaches : Parent infant Psychotherapy, The Solihull approach, NSCAP Under 3s Infant Mental Health training using infant observation and NBO (Brazelton approach). The above approaches are integrated into our individual core professional care delivery. Having a common approach and understanding in the pathway creates and holds the pathway between us all so our families get a consistent experience of care. The Nurture Well Group has collected data since commencing in 2014 and indicates a consistent reliable improvement on PHQ and GAD and good outcomes on reduction in parental stress and improvement in parent infant relationship satisfaction using the PSI and MORS outcome measures.
Results and evaluation	The parent infant Mental Health Pathway is evaluated on an annual basis by Dr Pauline Lee from the Tameside Early Attachment Service.

Key learning points and top tips	Investing time in developing and maintaining multiagency working relationships across the pathway has been essential so that it is a real integrated pathway not just a written document. The investment into training that has been provided to us has enabled us to take understanding back to our own professions and teams and has led to changes in culture and care delivery as we have been able to cascade our understanding and embed it into the team's approach to parent infant mental health care . Good supervision for this work is an absolute essential as it can be very challenging
Plans for spread	As explained, we are currently developing an antenatal wellbeing group and a postnatal wellbeing group to provide a more tailored approach to mothers and fathers alongside our standard IAPT therapies and the Nurture Well group.
Examples of material produced/resources used	We have created posters advertising the pathway to parents on 3 themes – pre conception mental health care, perinatal mental health care and one targeting fathers. They are to be placed in universal access points such as health centres, children's centres, libraries…. We have written a booklet called pregnancy parenthood and mental health – information for patients. This can be given to any parents accessing primary care mental health services . We are in the process of creating materials for the antenatal and postnatal wellbeing courses which include patient information booklets.

For further information

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4.7. Operating Department Practitioners

Description of the role of operating department practitioners in the maternity care pathway	Settings where operating department practitioners work
ODPs are involved with the NHS Improvement Maternal and Neonatal Health Safety Collaborative[f], as part of the first wave of Trusts in the national programme and they are involved in the Perioperative Care Collaborative[g]. **During the pre-conception period:** • ODPs care for the patient undergoing surgery as part of fertility investigations/interventions i.e. laparoscopy and support egg retrieval as part of invitro fertilisation. • ODPs undertake pre-assessment of the patients undergoing above surgery. **During the antenatal period:** • For pregnancy not continuing to term (i.e. termination of pregnancy or miscarriage): - ODPs are involved in pre-assessment of the patient prior to anaesthesia and surgery - ODPs care for the patient in theatre (surgery and anaesthetic) and in the post-anaesthetic recovery unit for surgical intervention (i.e. suction termination of pregnancy, evacuation of retained products of conception, Dilation and Evaculation). • ODPs care for patients undergoing any other anaesthesia and surgery during this time, particularly emergency non-pregnancy related as there are specific challenges in managing the airway of a pregnancy woman and so the ODP expertise is essential.	NHS hospitals. Independent fertility clinics.

[f] NHS Improvement (2017) Maternal and Neonatal Health Safety Collaborative https://improvement.nhs.uk/resources/maternal-and-neonatal-safety-collaborative/

[g] http://www.barna.co.uk/pcc/

During intrapartum: • ODPs provide surgical and anaesthetic care of the patient undergoing caesarean section delivery. • They support anaesthetists with epidural insertion on labour wards. • They are involved in the management of emergency scenarios i.e. maternal arrest as part of hospital 'crash' team.	Acute hospital setting
During the post-partum period: • ODPs support recovery of the patient post caesarean section / assisted delivery in theatre. • Provide care to the patient in theatre undergoing surgical interventions post vaginal delivery, for example manual removal of placenta or repair of third degree tear. • ODPs will work in all roles (anaesthetic assistance, scrub practitioner, circulator and post anaesthesia care unit) to provide care for these patients. • They are involved in the management of emergency scenario i.e. post-partum haemorrhage where surgical management is required.	Post-anaesthetic care unit in acute hospital. NHS or independent hospital setting.
Up to one year post birth: • ODPs are involved in pre-assessment, intraoperative and post-operative care of the patient undergoing any post-delivery surgery e.g. re-fashioning episiotomy scar.	

4.8. Orthoptists

Description of the role of orthoptists in the maternity care pathway	Settings where orthoptists work
During the pre-conception period: • Orthoptists sign post for genetic counselling for genetic disorders e.g. albinism **During the antenatal period:** • Orthoptists see pregnant women with pre-existing conditions that can be exacerbated by pregnancy such as: -Pituitary Tumours -Idiopathic Intracranial Hypertension (IIH) -Gestational diabetes -Hypertension • Orthoptists monitor visual signs and educate on the importance of health eating and keeping active during pregnancy to help reduce risk of exacerbation/ related complications **During the post-partum period:** • Orthoptists see pregnant women with pre-existing conditions that can be exacerbated following delivery such as those with multiple sclerosis **Up to one year post birth:** • Following 8 week check – If any visual problems/ strabismus suspected by parent/ carer/ GP/ Health Visitor referral should be made to local Orthoptic service. • Orthoptists undertake the assessment and follow up of infants with delayed visual maturation until normal visual function established. • Orthoptists assess and follow up children with congenital cataracts.	Outpatients and community settings

- Premature and low birth weight babies less than 32 weeks gestational age (up to 31 weeks and 6 days) or less than 1501g birthweight should be screened for retinopathy of prematurity (ROP) by an ophthalmologist. These children are the followed up by orthoptists for subsequent/ associated visual problems/ strabismus.

4.9. Osteopaths

Description of the role of osteopaths in the maternity care pathway	Settings where osteopaths work
During the antenatal period: • Osteopaths have a string contribution to make during the antenatal period. They safely treat acute musculoskeletal pain which is so common in pregnancy where medication may not be indicated. Then by working manually within each body system to enable the pregnant woman to reach her physiological potential and thus be better at being pregnant. Every part of the woman changes to accommodate the increased demand throughout the body, from the cardio respiratory system to the digestive system and beyond. Too often symptoms such as dyspnoea or constipation will present themselves and be treated as part of a normal pregnancy despite the fact that they are uncomfortable and can cause acute dysfunction. • Osteopathy assists in preparation for delivery with particular reference to pelvic and spinal mechanics considering the postural adaptations of pregnancy aiming to relieve the symptoms associated with these. • Since 1980 there has been an Expectant Mothers Clinic at the University College of Osteopathy (formerly known as the British School of Osteopathy)) . This clinic was established so that students could learn specialist skills in diagnosis and treatment of the obstetric patient and her new born. Every school of osteopathy nationwide now teaches an obstetric approach meaning that osteopaths all over the country are being trained in the care of this specialist group. **During intrapartum:** • No part to play here unless specifically invited into the delivery room by the attending doctor or midwife. **During the post-partum period and up to one year post birth:** • Many women explain that the pain in their back or pelvis started with the birth of their last child. Osteopaths are ideally placed to be part of the post-natal checking team after the mother has	Most osteopaths work in private practice Osteopathic centre for children Usually community based, but it can be domiciliary in the patients home or even if

been seen by the GP or midwife so that any potential problems are treated and thus aid the recovery process. • Osteopaths assess the effects of parturition and where appropriate address pelvic floor function, spinal and pelvic mechanics, postural changes and adaptations from pregnancy to post- partum, with attention to feeding, lifting, carrying the infant etc, provides empathetic support for the wellbeing of mother and child.	acute pain at the hospital bedside Osteopathic Centre for Children

Good practice examples – Osteopaths

Laura with Symphysis pubic dysfunction

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum
	Laura is a 28 year old PA who is very fit. She likes to go to classes and to pregnancy yoga and tries to swim twice each week. She is 32 weeks pregnant prima parous and has a sharp stabbing pain over the left buttock that radiates around the pelvic bone on the right going down to the pubic bone. It started 6 weeks ago and is getting to the point where she cannot put the foot to the floor when she gets out of bed, and walking is very painful. She mentioned it to the midwife at her ante natal appointments and was told to rest more(!) then at the second visit she was told she had SPD and they were going to arrange a physio appointment. Otherwise she is fit and well in her general health except for the fact that she used to suffer from “growing pains” as a child but has not been bothered as an adult. The pregnancy is progressing very well. She asked her midwife if she thought that osteopathy rather than physiotherapy could help and was given the name of my practice. On further questioning she reveals that her sleep is very badly affected as she gets stuck and cries out in pain as she attempts to turn over. She has tried to put a pillow between her knees on the advice of the midwife but with little success. She has difficulty using the shower as raising the leg to get over the bath is so painful. She has difficulty getting in and out of the car as again she cannot open her legs. The inability to do this is really worrying her as she wants as natural a delivery as possible and a friend was told that a similar problem meant she would have a caesarean section.

On examination she was able to stand but avoided putting too much weight on the affected side. Her posture was unremarkable for the stage of her pregnancy and she did not have a deep lordosis or a shallow sway back posture. There was a minor scoliosis but again nothing untoward.

Active movements showed immediately that she had a painful restriction involving any movements towards the affected side or into spinal extension. All motion into flexion or the other side were unaffected.

On Passive motion testing the SIJ on the painful side was blocked at the superior pole and relatively hypermobile on the inferior pole compared to the non-painful side.

On examination of the pubic symphysis (with verbal consent and a chaperone offered) she had severe pain on the anterior superior surface and any attempt at abduction was severely limited and painful with spasm into the adductor muscles and buttock muscles.

The diagnosis was of an acute SIJ lesion causing painful restriction with a secondary lesion at the pubis.

The situation was explained to her and she was reassured that these cases usually settle down with two or three treatments which were relatively painless and completely safe for the baby.

Treatment was started at the first visit aimed at gently manually mobilising the SIJ with simple stretching and balancing ligamentous tension techniques. The pubic symphysis was mobilised with a very gentle manipulation technique providing immediate relief from the muscle spasms. She was able to get off the treatment table and walk much easier but still in a lot of pain.

She was seen three more times before her delivery. Each time the SIJ was mobilised, eventually with a high velocity technique using the minimalist of levers in a safe position and work to the soft tissues of the lumbar spine and diaphragm helped the final change of posture in the third trimester.

She was discharged until a post-natal visit. She went on to have a normal uncomplicated labour with no forceps and a superficial perineal tear that was already healing at the 6 week stage.

	Needless to say, she was delighted with her osteopathic treatment and has said that she will come back again for the next pregnancy around 20 weeks to be checked whether she has pain or not.
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Sue with hypermobile joints

Stage of maternity care pathway where good practice/case study is focussed	Antenatal Post-partum
	Sue is 21 years of age and is a sports coach specialising in gymnastics and trampoline. She is very fit and only last year finished competing at the highest level in her sport. She is 30 weeks pregnant and really struggling. Since she was a teenager, she had joint pains in her knees and ankles, sometimes wrists but repeated spinal acute attacks of pain. Since the end of the first trimester her back pain and ankle pains have been worse. She mentioned it to the GP who was concerned that she may have a rheumatological condition and arranged for her to be seen urgently by a Consultant at the local hospital. All blood tests were normal and other biochemical and inflammatory markers were thought to be unremarkable. He did think that she was very mobile despite her sporting activities and this together with the Relaxin produced by the corpus luteum of pregnancy was causing muscle spasm and guarding. He said that at this stage of the pregnancy she could take Paracetamol and Ibuprofen safely and that she needed to see a physiotherapist who specialised in the care of hypermobile cases once she had delivered. She spoke to her GP about Osteopathy and the doctor was reticent saying that joint manipulation could make things worse. Nevertheless, she came in to the clinic to try to find a solution to her problems. On examination she was very mobile indeed. She measured 9/9 on the Beighton scale and 10 on the Brighton scale (two scales that are used to determine joint hypermobility. She was not typically tall and thin with overlong fingers that might make the practitioner think of Marfan's syndrome. Indeed, she was shorter than average. She stood with her knees in

hyperextension and did not have any exaggerated lordotic curves in her lumbar spine and there was no evidence of a scoliosis.

Her Sacro Iliac joints were also very mobile giving spinal muscle spasm and buttock pains. Her peripheral joints were not showing signs of heat or swelling but again the ankles in particular were hyper mobile compared to normal. She told me that since a child she has had to strap her ankles before training or competition otherwise she was going to “put them out”.

From an osteopathic point of view there were also problems with the postural changes of pregnancy that one would expect to see. She did not look like a patient in the 30th week of pregnancy, more like someone at the end of the 20th week! This meant that she was showing what is known as a sway back posture. From the second to the third trimesters the posture changes at the junctions of the neck and the shoulders and at the level of the start of the lumbar spine so that the weight of the gravid uterus is going to fall onto the pelvis which is where we want it to be in order to deliver the child successfully. In her case the weight was falling to far back because of the hypermobility and thus more muscle spasm as the postural muscles try to hold on.

Treatment consisted of work done to the soft tissues in front of the hips and in the spine right up to the top of the cervical spine to encourage them to balance with their pull and thus allow the changes needed at the end of the pregnancy to take place. Postural muscle imbalance has been shown to be responsible for many cases of spinal and pelvic pain and a good postural analysis is essential in osteopathic care of pregnant women.

She was seen every week until her due date. Gradually she started to feel that things were improving despite being heavier and more pregnant. She was doing controlled core stability exercises at the gym under the watchful eye of her former professional coach. Techniques applied to the musculoskeletal tissues did not include any manipulation as such as it was felt that her pre-existing joint laxity was a contra indication.

She was under the common misapprehension that osteopaths click joints and was not aware of what else went on during treatment. Work on the muscles and ligaments alone can be very effective if supported with tailor made individually prescribed exercise programmes. Then it

	can become obvious that manipulation is only a technique and in a half hour treatment session it takes 3 seconds to manipulate a joint and the remaining 29 minutes 57 seconds is where good osteopathic care can be found. Safety is paramount when treating pregnant patients. In this authors experience of treating patients over the last 40 years and training osteopaths throughout the world, there has never been even one documented reported case of a manipulation causing a miscarriage or any risk to the foetus at all. As long as the techniques are well taught and appropriate, osteopathic care in pregnancy can only be a positive intervention.
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4.10. Paramedics

Description of the role of paramedics in the maternity care pathway	Settings where paramedics work
During the antenatal period: Paramedics are involved in: • Attendance at 999 calls for all maternity related issues commonly, PV (per vaginal) bleeding, ectopic pregnancy, miscarriage, complications following termination of pregnancy, spontaneous rupture of membrane, preterm labor, cord prolapse. • Maternal mental health crisis, suicide attempts. • Transfer of women from community settings following referral to community midwife i.e. possible pre-eclampsia. • Maternity trauma including slips trips and falls as well as RTCs (road traffic collisions) • Maternal cardiac arrest • Exacerbated medical conditions due to the pregnancy i.e. asthma or diabetes • Domestic violence incidents and assaults • Intra-hospital transfers for intrauterine transfusion (IUT). • In the emergency operations center providing advice to call takers and in the 111 call centres with regards to maternity related issues	Call centres, Community, Pre-hospital Intra-hospital transfers
During intrapartum: • Paramedics attend at births as well as birth before arrival (BBA) • Support complications such as breech birth, shoulder dystocia, twins, pre-term birth, concealed pregnancies as well as unknown pregnancies and maternal collapse	Pre-hospital
During the post-partum period: • Treat patients with post-partum hemorrhages, retained placentas, • Care of the newborn and newborn transition and resuscitation.	

- Treat those with eclampsia, maternal collapse and arrest, amniotic Fluid Embolism arrest, sepsis
- Undertake patient transfers to tertiary units

Midwifery Led Units / home birth transfers

Up to one year post birth:

- Paramedics deal with maternal mental health issues, suicide attempts, maternal collapse / arrest
- Support newborn issues, group B streptococcus sepsis, breathing difficulties, bronchiolitis croup whooping cough

Call centres

Community

Pre-hospital
Intra-hospital transfers

Good practice example – Paramedics

The London Ambulance Service (LAS) pioneering midwifery service

Stage of maternity care pathway where good practice is focused	Antenatal Intrapartum Postpartum First year post birth
Summary description of initiative	The LAS are in the process of piloting a pioneering new service into prehospital care. The LAS are the first ambulance service to recruit a consultant midwife, Amanda Mansfield, to their clinical and quality directorate, she has led the way to introducing midwives into not only the management structure but the control room as well as eventually to respond in rapid response cars to assist pre-hospital clinicians.
Background/context	The LAS deals with 8,000 to 10,000 maternity calls every year catching 400 babies over the phone and further babies caught by the ambulance clinician on scene. The introduction of this role has revolutionised the way that maternity is approached by the LAS. The introduction of joint maternity training has assisted both ambulance crews and local midwives to build confidence as well as improving skills and communication. Maternity educators have been given additional skills and training to assist the ambulance staff, this will be further strengthened and assisted by the maternity care leads.

Approach/methodology	In her role, Amanda has ensured that UK ambulance services are recognized for the role they play in the provision of pre-hospital maternity care. Once other UK ambulance services see the impact that this approach will have on patient safety and women's satisfaction then others will follow suit. Amanda developed and has now overseen the introduction of the first practice lead for pre-hospital maternity care roles. These new roles will be responsible for overseeing the ongoing delivery of joint maternity training and leadership about the promotion of maternal and newborn safety in the pre-hospital setting. The new roles will support Amanda, as they lead of the new maternity pioneer service. This initial phase will pilot midwives in an advisory role to be engaged with pregnancy and childbirth related calls into the ambulance service.
Results and evaluation	Initial evaluation from joint maternity training has provided excellent feedback from both ambulance staff and community midwives. The additional focus on maternity training has resulted in acknowledgement of the London Ambulance Service and its management of collapsed pregnant women (Attached)
Key learning points and top tips	Lead with passion and enthusiasm and engage staff and service users on the journey of transformation. Engage your key stakeholders early in your projects and programs, Be visible and access staff in their usual place of work particularly important in services crosses large geographical areas.
Plans for spread	National level throughout all UK ambulance services
Examples of material produced/resources used	LAS Maternity Card Sample of Joint Maternity Training Program Feedback from "Whose Shoes" events – Service and Staff engagement event. Job description for Practice Lead Role.

For further information

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4.11. Physiotherapists

Description of the role of physiotherapists in the maternity care pathway	Settings where physiotherapists work
During the pre-conception period: • Physiotherapists are involved in pelvic floor assessment and treatment including for conditions such as vaginismus which can prevent intercourse/conception, psychosexual support (practitioners with advanced training). • They are involved in providing exercise advice / optimising physical condition for women planning pregnancy (e.g. for obese women). • They provide relaxation/stress/anxiety education and management. **During the antenatal period:** • The obstetric physiotherapist aims to prevent or alleviate the physical and emotional stresses of pregnancy and labor. This is achieved by improving the mother's physical fitness and her understanding of the changes taking place to her body during pregnancy. The obstetric physiotherapist is a skilled teacher of effective relaxation, breathing awareness and positioning and thus can prepare the woman and her companion for labor. The preparation of both parents for labor and parenthood is undertaken ideally in collaboration with midwives and health visitors. Where problems arise, such as backache, pelvic pain and stress incontinence, the obstetric physiotherapist is a skilled clinician in the treatment of these conditions. • Interventions undertaken by physiotherapists include: - education –changes of pregnancy and impact of these, labour, breathing, birthing positions, pain management, coping skills - teaching pelvic floor exercises - exercise advice and classes - hydrotherapy - brief psychological interventions (cognitive / behavioural strategies) & support - assessment and treatment of musculoskeletal issues – such as back and pelvic pain, including manual therapy where appropriate - Acupuncture for pain management	Online, sometimes hospital or community settings Hospital setting generally Current projects setting up Skype assessment to offer patients more choice.

During the post-partum period:

- The obstetric physiotherapist can help the mother in her recovery by teaching exercises, back care and general health education, including coping with the stresses of parenthood. They can assess and alleviate such problems as a painful perineum, backache and incontinence.
- POGP (pelvic, obstetric and gynecological physiotherapy network) members are experienced in recognising problems of female sexual dysfunction which they can help manage or refer on to psychosexual counsellors. Some members may undergo additional training to enable them to work more fully with these clients [73] [74] [75].
- In addition, the CSP and POGP has worked with the RCM in the production of e-learning materials for midwives relating to pelvic floor exercises and good continence care during and post pregnancy. In 2018 the RCM approached the Chartered Society of Physiotherapy to update the learning resources as below [76]:
  - Pelvic floor education on ward (support staff in some settings)
  - Postpartum bladder care on the ward
  - Musculoskeletal issues – continued evaluation and treatment of MSK issues such as back and pelvic pain.
  - Treatment for postnatal pelvic floor dysfunction, including urinary incontinence, pelvic organ prolapse, sexual dysfunction
  - Treatment following obstetric anal sphincter injury.
  - Postnatal recovery of abdominal and pelvic floor muscles
  - Education on moving and handling, baby care, optimising posture and movement patterns
  - Exercise advice and programmes to return to sport (whether recreational or high level).
  - Postnatal exercise classes
  - Postnatal perineal trauma support for women who have sustained perineal tears.
  - Brief psychological interventions (cognitive / behavioural strategies) & support
  - Assistance with sexual function

Acupuncture increasingly only provided in private practice

Generally, hospital setting

Sometimes community setting

Increasingly advice also offered on internet

Generally, hospital setting

Up to one year post birth: Physiotherapists are involved in the: • Treatment for musculoskeletal conditions • Assessment and treatment for pelvic floor dysfunction e.g. urinary incontinence, pelvic organ prolapse, sexual dysfunction, • Care following an obstetric anal sphincter injury, for faecal incontinence or obstructed defecation. Patients seen as referred / needed. When patients are seen post-natally depends on local decisions e.g. patients may be seen by a general physiotherapy team after 3 months for musculoskeletal conditions in most settings.	Sometimes community setting

Good practice examples – Physiotherapists

Physiotherapist extended scope practitioner perineal clinic.

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	Physiotherapist in the urogynaecology clinic alongside consultant. Reviews and manages the postpartum outcomes for all OASI (obstetric anal sphincter injuries). This service also follows up complications following operative vaginal delivery or incontinence symptoms.
Background/context	Patients following OASI, operative vaginal delivery are at higher risk of faecal and urinary incontinence.
Approach/methodology	Physiotherapists working as an extended scope practitioner working in urogynaecology clinic for review of OASI and ongoing perineal wound problems.
Results and evaluation	- Monitoring of patient outcomes is able to be achieved consistently with this management. - Assessment is by a highly skilled clinician, improving the patient's confidence in management of their care. - Treatments are also able to be provided timely, as a one stop shop treatment. - Reduction the incidence of urinary incontinence, faecal incontinence and sexual dysfunction. - Radiology and manometry can also be reviewed.
Key learning points and top tips	- Physiotherapy support aids correct patient pathway and decision making. - Patients with perineal trauma also supported to the correct pathway and management.
Plans for spread	There are physiotherapy ESP clinics across the London areas, therefore spread to further trusts has been seen to be effective. With the new apprenticeship schemes supporting the development of Extended scope physiotherapists this is an ideal time to increase provision for further services and training at this level.

Examples of material produced/resources used	Perineal care including suture removal (suture removal kit. Cauterisation of wounds (silver nitrate) Wound dressings, e.g. aqual gel / kalkostat. Ordering investigations such as endoanal ultrasound and manometry.
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Antenatal care – Musculoskeletal pain pathway

Stage of maternity pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	• Antenatal patients with MSK pain (e.g. pelvic girdle pain, back pain) can self-refer to physiotherapy at the hospital they are booked at e.g. Barnet hospital, royal free hospital. • Quick access group for assessment and advice • Following care and treatments offered- 1:1 physiotherapy including exercise, manual therapy, acupuncture, and electrotherapy advice. • Women are also held on SOS for 6 weeks after birth if on-going symptoms of MSK pain continue.
Background/context	The antenatal period can lead to MSK pain due to the changes of pregnancy. The aim of the service is to educate, prevent, and treat any condition that arises in pregnancy. The goal is to minimise the impact of chronic pain following pregnancy. It is known that Back pain is higher in the female population and this is thought to be due to the impacts of high workload and demand on the changing body after pregnancy.
Approach/methodology	Method: Group based treatment for early triage, leading to 1:1 treatment.
Results and evaluation	Low return rates once diagnosis and initial treatment provided. Patients seen between 2-4 weeks. High patient satisfaction for care and service. 100% report would recommend to friends and family.

Key learning points and top tips	Women often want a quick diagnosis and management strategies. Often, they do not want lots of treatment unless significant pain is occurring. 1:1 treatment can alleviate pain and support choices for labour.
Plans for spread	This service I initiated at Guys and St Thomas, Chelsea and Westminster, Imperial and now the Royal free. This was also something I learnt as a student 15 years ago in Bolton. Per site it has been adapted slightly to suit commissioned contracts. It therefore is easily reproducible and could be encouraged nationally.
Examples of material produced/resources used	Power point presentation Gym space for exercise X2 therapists but more can be used for triage if needed. POGP leaflets for pelvic girdle pain, fit for pregnancy.
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Postnatal inpatient physiotherapy care pathway

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	Physiotherapists / physiotherapy assistants support midwifes in the postpartum period on the ward.
Background/context	Midwifes often need support in postpartum bladder care management. High incidences of urinary retention are noted on the postnatal ward and with early support and management there is a reduction of long term catheter usage. Additionally, the physiotherapists advice on wound care and management for these patients. This service also facilitates the patients in the correct postpartum follow up care pathway.
Approach/methodology	Inpatient physiotherapy time, providing support to the patients on the ward if needed.
Results and evaluation	Bladder care audit completed, and patient case study reviews of incidences and risks occurred from urinary retention.
Key learning points and top tips	- Physiotherapy support aids correct patient pathway and decision making. - Patients with perineal trauma also supported to the correct pathway and management.
Plans for spread	This service occurs sporadically across the UK. Again, spread is achievable if commissioned correctly within the maternity services. A main restriction in this service is that women's health or pelvic health physiotherapists are commissioned under an MSK cost per case contract. This reduces the incentive for inpatient care and increases the therapist time in outpatients. Under a 'block contract' this isn't seen as much.

	I have a current quality improvement case study underway at the Royal Free.
Examples of material produced/resources used	Physiotherapists. Catheter management kit for postnatal ward useful.
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4.12 Prosthetists and Orthotists

Description of the role of prosthetists and orthotists in the maternity care pathway	Settings where art therapists work
During the antenatal period: • Orthotists may assess a woman for a lumbar support or sacroiliac joint belt to help manage musculoskeletal concerns that can develop particularly in the third trimester. Normally referral would be from physiotherapy, midwife or GP. • Orthotists may provide specialist maternity compression hosiery to women at identified risk of deep vein thrombosis. • Women who use prosthetic limbs may require increased review of the fit of their prosthesis throughout pregnancy due to soft tissue volume fluctuations. This is provided by their prosthetist. • Prosthetists are infrequently involved in antenatal counselling should a limb absence be noted on scans. Consensus of prosthetists is that this is rare.	Community or acute hospital settings
Up to one year post birth: • Orthotists regularly treat neonates and infants to help manage congenital concerns. One example is treating foot and ankle conditions such as congenital talipes equino varus (CTEV) and metatarsal abductus with a specialist range of boots and abduction bars. Another example is treating hip dysplasia with Pavlick harnesses or similar devices. Normally these types of treatments are part of a wider multi-disciplinary package of care involving orthopaedics and physiotherapy. • Orthotists also treat cases of plagiocephaly typically prescribing cranial remodelling orthoses to infants ideally starting treatment between 3-7 months after birth though treatment can be commenced successful up to 18 months old. In most regions this treatment is not available via the NHS and is provided privately. • Prosthetists may have early consultations with children who are born with limb absence and their families. However, prosthetic limb prescription within the first year post birth is rare. Typically, this process surrounds explaining what prostheses will available when the child grows and also serves to allay fear whilst managing expectations going forwards. This would also be applicable to the child who undergoes limb amputation within the first year of life – perhaps after meningitis or sepsis.	Community or acute hospital settings

4.13 Psychologists

Description of the role of psychologists in the maternity care pathway	Settings where psychologists work
During the pre-conception period: **Clinical psychologists** • A woman may be referred to a clinical psychologist in a learning disability team for assessment of their understanding of sex and relationships, consent, contraception, pregnancy, health facilitation with appointments, e.g. In vitro fertilisation (IVF) and to provide education and support **Health Psychologists** • Clients are referred for: - Phobias such as hospital/needle or tocophobia. - Previous birth trauma - Previous still birth or medical termination of pregnancy - Sub/Infertility - Gynaecological presentations (Pelvic pain, vaginismus, endometriosis etc) - Anxiety/depression and other (mental health) presentations. - General psychological distress or psycho-social issues • Health psychologists assess the clients and complete formulations to determine the next steps. This may include evidence based psychological interventions such as mindfulness and pain management and an integration of other modalities such as cognitive behavioural therapy, psycho-dynamic, person-centred, eye movement desensitization and reprocessing. • Health psychologists are part of the maternity care pathway and should have clear pathways to other services such as Improving Access to Psychological Therapies (IAPT) and perinatal mental health teams and crisis mental health teams as well as third sector organisations.	Based in community or acute settings and can complete their work there or in the client's own home.

During the antenatal period:

- Women are referred to the learning disability clinical psychology service to identify whether they have a learning disability and to speech and language therapy to assess communication and understanding, often because people are not engaging well with services.
- Unfortunately, these referrals often come very late in the pathway when it is not clinically appropriate to undertake formal learning disabilities assessment, i.e. late pregnancy is not a good time to be undertaking cognitive/neuropsychological assessment.
- When referrals are received in a timely way, psychologists can undertake assessments and make recommendations for antenatal services to help them make reasonable adjustments to the persons support. In complex cases, learning disability nurses may become involved in a health facilitation and psychoeducation role alongside another professional's role.

During intrapartum:

Health psychologists:

- Can provide psychological support in person during birth, both vaginal and C-section.
- Psychologists write formulation driven, psychologically informed care-plans for women and their partners that highlights particular psychological difficulties that the MDT need to be aware of so as to, for example, minimise birth trauma and enhance psychological wellbeing and minimise triggers for deterioration in mental health postnatally.
- Health psychologists also provide training aimed at other professionals (midwives, health visitors, social care practitioners, perinatal service staff, children centre staff and CAMHS practitioners) as well as one-off sessions for women and their partners.
- Health psychologists will also provide reflective supervision for other professionals.

Clinical psychologists:

- Typically, not involved in this stage of the pathway, unless a pregnant woman with a learning disability is open in a team and requires specialist support.

During the post-partum period:

Health psychologists:

- Clients are referred for:

-Pregnancy related complications (diabetes, foetal abnormalities)
-Following stillbirth, miscarriage or feticide

- Post-traumatic stress disorder (PTSD) caused by birth trauma

- Gynaecological presentations (pelvic pain, vaginismus, endometriosis etc)
- Anxiety/depression and other (mental health) presentations.
- General psychological distress or psycho-social issues

- Psychologists will meet with women before discharge from hospital, who the MDT have concerns about from a psychological perspective for example adjusting to an admission to the ITU following labour and birth.
- Psychologists also provide input to families and staff in neonatal units.

Clinical psychologists:

- Women/families may be referred for assessment due to concerns raised about parenting capacity. If the individual has been known to the team, they will share information that might be relevant. Clinical psychologists would not typically undertake assessments at this stage.

Up to one year post birth:

Health psychologists:

Clients are referred for:

- Post-traumatic stress disorder due to birth trauma
- Anxiety/depression and other (mental health) presentations.
- General psychological distress or psycho-social issues
- Attachment difficulties

- Once a referral is accepted into the service there will be an assessment. The intervention adopted will be based on the assessment and ongoing formulation.
- Psychologists offer direct work with infants and families first year post birth or signpost to other relevant services. This may include work with women and their partners for example in relation to birth trauma
- Multiple interventions are often delivered to infants and their carers referred to the service. For example, a primary caregiver might receive a specific cognitive behavioural therapy intervention plus a parent-infant psychotherapy intervention focusing on their interactions and relationship with their infant.

Clinical psychologists

- Women/families may be referred for assessment due to concerns raised about parenting capacity. At this stage clinical psychologists may get involved to undertake cognitive/communication assessments, psychological assessment of mental health and well-being. The presentation of mental health problems in people with learning disabilities is often different and may be overlooked due to diagnostic overshadowing.
- Clinical psychologists can work alongside social services and health visitors regarding assessment and interventions.
- There is good practice guidance available for supporting parents with a learning disability, so our role is often to signpost to existing resources that will support women and families.

Good practice examples – Psychologists

Bump Start: Developing and piloting a healthy living group intervention for obese pregnant women

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	A theory and evidence based community intervention aimed at encouraging obese pregnant women to make healthy dietary and physical activity changes.
Background/context	The health problems linked to maternal BMI for both mother and baby are substantial and well-known (Catalano and Ehrenberg, 2006), but the UK prevalence of antenatal obesity in 2006 was 18.5% and this figure only seems to be increasing year-on-year (Heslehurst et al, 2010). As well as risks to the mother and baby, maternal obesity puts more pressure on squeezed health services, with health-care costs estimated to be 37% higher among obese women compared to those with a normal weight(Morgan et al, 2014). Midwives report a lack of time, skills and confidence to offer extended support on the issue. At the same time, pregnancy may be a key 'teachable moment' when women have more contact with health services and may be motivated to make healthy changes for them and their baby. Anecdotal evidence suggested that women with a higher BMI wished for holistic programmes at this time enhancing statutory maternity care (focussing on healthy eating, physical activity and stress management), delivered by multi-disciplinary teams in supportive groups in a community setting. Our NHS Public Health department provided a small amount of funding and asked two health psychologists to design and pilot an antenatal programme for women with a high BMI and evaluate feasibility through interviews with participants and staff.
Approach/methodology	An extensive scoping exercise , including interviews and focus groups with key stakeholders and a literature review was conducted by Health Psychologists working in an NHS public health

department (for further details DOI: 10.12968/bjom.2017.25.6.386). This exercise was used to inform the intervention and behaviour change model that the programme should be guided by.

The COM-B model is a psychological model of behaviour change and was used to guide the intervention. It is part of a wider framework for intervention design called the behaviour change wheel (Michie et al, 2011), and is an intervention development approach increasingly being used
to design effective health behaviour change interventions (Handley et al, 2015). It suggests that to perform behaviour, any individual must have:

- Capability (knowledge and skills to be able to perform the behaviour)
- Opportunity (a physical and social environment that enables them to do the behaviour)
- Motivation (a favourable attitude towards the behaviour, both in terms of conscious decisions and habits).

The scoping exercise suggested that all three elements needed to be targeted in the programme in order to facilitate behaviour change.

Using behaviour change techniques to increase capability, opportunity and motivation, a 6 week healthy living group programme with 4 monthly follow ups was developed called ‘Bump Start’ and delivered in a community setting by a team of midwives, health psychologists, physiotherapists and dietitians. The programme focused on making healthy changes to diet and physical activity during pregnancy and managing stress, to ultimately reduce gestational weight gain and risk of obesity-related complications. For a detailed overview of the programmes’ contents, see DOI:10.12968/bjom.2017.25.6.386.

Participants completed questionnaires measuring fruit and vegetable intake and physical activity before the intervention, and at 6 weeks and 4 months post intervention. Step count was also recorded every week through pedometers.

Results and evaluation

10 women attended the pilot group of the programme (two dropped out due to illness) and attendance was strong (at least 70%) throughout the programme.

For eight participants with complete data at 6 weeks, mean self-reported minutes of moderate physical activity, measured through the Global Physical Activity Questionnaire, more than doubled from 478.75 minutes per week at baseline to 1128.75 minutes at follow-up.

Mean self-reported portions of fruit and vegetables consumed per day increased from 3.12 to 7.00 portions per day.

Four women attended the final follow-up session to provide data (the other women were unable to attend as they had very recently given birth or were just about to). Nearly all were full-term or had recently delivered. Understandably, physical activity had decreased, with a mean of 251.25 minutes of moderate activity per week. However, three of the four women were still meeting the ACOG guidelines for physical activity.

Participants were highly positive about Bump Start, saying how important the programme had been to them during pregnancy, the sustainable healthy changes they had made, and even volunteering to make a promotional video on their experience to assist in future commissioning. (available at https://youtu.be/_-TJW7mer3k) Four themes emerged from the focus group data analysis:
1) new knowledge, skills and confidence
2) value of expert reassurance
3) making healthy changes
4) social ties.
Health professionals delivering the intervention were similarly enthusiastic about the programme and hope that it would be scaled up and further tested in other settings.

Key learning points and top tips

- The initial Bump Start pilot had promising initial results in terms of engagement for both women and health professionals within the programme
- At 6 weeks post-baseline, participants' mean fruit and vegetable consumption had more than doubled, indicating healthy changes to diet

- Behaviour change theory and techniques were used to devise Bump Start, which was delivered by a multi-disciplinary team including a health psychologist

Recommendations for future programmes:

- Investing time in investigating the literature and exploring the needs of ante/postnatal women and local stakeholders before embarking on the development of a programme is vital
- Facilitate the formation of a supportive peer group of participants by holding the programme in a local community setting, creating an open, friendly environment and encouraging women to meet outside of the programme and after it has ended
- Base the programme on behaviour change theory and specify intervention content using a behaviour change taxonomy (Michie et al's Behaviour Change Technique Taxonomy, 2013) and the COM-B model.
- Involve an MDT in the design of a programme, including midwives and health psychologists for their behaviour change expertise and holistic focus on stress management.
- Invest in training one or two individuals to deliver the programme, as opposed to using a range of specialist health professionals to deliver each session across multiple groups, if this is not sustainable
- Plan carefully to evaluate the programme in the long term.

Plans for spread

The findings have been shared (via two oral presentations) at Annual Public Health conferences.

A journal article about the development and piloting of the programme was published in the British Journal of Midwifery: Bull, E. R., Clayton, H., & Hendry, T. (2017). Bump Start: developing and piloting a healthy living group intervention for obese pregnant women. *British Journal of Midwifery*, *25*(6), 386-395.

Further work is continuing, to pilot the intervention with further groups of antenatal women with a high BMI. We would be delighted to help take forward future spread and would be happy to

	be put in contact with colleagues wishing to take the programme forward in their own NHS trust.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	The commissioning You Tube video features three service users and can be accessed here: https://youtu.be/_-TJW7mer3k They all gave permission for their story and any quotes to be shared to help Bump Start become more widely known to other health professionals.
Examples of material produced/resources used	Bump Start leaflet attached Bump Start facilitator delivery manual is available on request
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Training maternity services in Healthy Conversation Skills (HCS) to meet the government's "Making Every Contact Count" (MECC) agenda.

Stage of maternity care pathway where good practice/case study is focussed	Conception Antenatal Intrapartum Post-partum First year post birth
Summary description of initiative	A range of interventions whereby those working in maternity care are trained in HCS in order to have more effective conversations with women about their health & well-being, in order to promote healthy changes to behaviours such a diet and exercise. This has been a collaboration between our academic team, including myself as a Health Psychologist, and local agencies and service providers from the outset, ensuring that our agendas matched.
Background/context	HCS training has been developed by our multi-disciplinary team at the MRC LEU, in order to provide a feasible, scalable intervention to tackle population health challenges, like obesity, diabetes, heart disease.
Approach/methodology	The training is based on health psychology theory and models, such as social cognitive theory, and uses a range of behaviour change techniques within the delivery and content in order to provide high quality pedagogy.
Results and evaluation	Early findings have shown that practitioners find the training and use of the skills acceptable and feasible within their practice. Confidence, importance & usefulness for having healthy conversations increase from before to after training, and staff demonstrate high level of competence in using the skills over time.

Key learning points and top tips	Training frontline staff in HCS is an effective mode of delivery to ensure MECC requirements are met within healthcare organisations. Having a healthy conversation need not take any longer within the appointment time. It's about doing things differently rather than doing more. Staff appreciate learning practical skills to support behaviour change, as they have invariably not had any training in this area before. Unpublished data (manuscript in preparation) shows that pregnant women appreciate HCS-trained research nurses having these conversations with them.
Plans for spread	HCS training forms the core of the MECC approach in the region covered by Health Education England (Wessex), where an active MECC/HCS Trainer network meets several times a year. A train-the-trainer model ensures scalability and other areas of the UK have also been serviced with HCS training. We are actively working to get HCS training into midwifery undergraduate programmes as well as in CPD activities for those already in practice.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	This example neatly demonstrates the usefulness of the skills for this Community Nursery Nurse: *"I have just used my new skills with a parent who was very unhappy with her choice of nursery for her baby. Using the Open Discovery Questions, she was able to work out what was really concerning her and to formulate a plan moving forward. She said that being able to explore her feelings and concerns had made a massive difference. She said I was a Guru - see what you've done to me!! I hope you don't mind me contacting you, but I just wanted to say thank you."*
Examples of material produced/resources used	We have a Wessex MECC/HCS Training Manual and associated resources for all our trainers to use. These are available for all trainers in our network to download. http://www.wessexphnetwork.org.uk/mecc

There are other websites showcasing the HCS approach, such as the Infant & Toddler Forum's Chat pages:

https://www.infantandtoddlerforum.org/

and in New Zealand:

http://www.healthystartworkforce.auckland.ac.nz/en/our-education-programmes/healthyconversations.html

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E-learning to facilitate student midwives' engagement in effective conversations about weight-related behaviour change with pregnant women

Stage of maternity care pathway where good practice	Antenatal Post-partum First year post birth
Summary description of initiative	An online training course was adapted for midwifery (developed for medical students and doctors, based on behaviour change theory). The aim of the training was to prepare student midwives to have discussions with pregnant women. Student midwives at the University of Manchester took part in the training and evaluated their experiences.
Background/context	Cochrane reviews have shown that healthcare professionals use diet and exercise behaviour interventions to support women to lose weight after pregnancy, but not during pregnancy. Pregnancy presents a series of 'teachable moments', events or circumstances, which create salient health concerns with links to health behaviours. Women are motivated to change behaviour for the benefit of their baby's health, and benefits from regular presence of health care professionals Health care professionals understand the importance of gestational weight gain and obesity and are motivated to address the issues in consultation yet find it uncomfortable to discuss health-related behaviour change with patients. Health professionals agree on the importance of having behaviour change conversations, and national initiatives like MECC underline the importance of these conversations, but health professionals aren't confident about how to have these conversations. Therefore, health psychologists developed a toolkit (Tent Pegs), based on behaviour change theories (BCT) which we have used in a number of different contexts. The training was based on the toolkit and adapted for use in midwifery with midwife colleagues at the University of

	Manchester. In this way, psychologists can contribute behaviour change expertise to maternity so that midwives carry out their clinical practice in a different way.
Approach/methodology	E-learning with mixed methods evaluation (pre and post questionnaires plus interviews).
Results and evaluation	Online BCT training improved the midwifery students' confidence, knowledge and beliefs that this is part of their role. They also reported finding the training helpful in better preparing them for this challenging element of their routine practice.
Key learning points and top tips	Training for student midwives increases behaviour change knowledge, and confidence/beliefs to have healthy conversations. Training didn't change intentions/attitudes for healthy conversations, but pre training levels were already high. Online training for student midwives is feasible/acceptable. They felt prepared having these conversations in practice.
Plans for spread	In discussion about implementation of this training programme with qualified midwives.
Examples of material produced/resources used	Paper recently published about this – Hart, J, Furber, C, Chisholm, A, Aspinall, S, Lucas, C, Runswick, E, Mann, K & Peters, S 2018, 'A mixed methods investigation of an online intervention to facilitate student midwives' engagement in effective conversations about weight-related behaviour change with pregnant women' Midwifery, vol 63, pp. 52-59. DOI: 10.1016/j.midw.2018.05.001 More general information about Tent Pegs: www.tentpegs.info

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Infant Mental Health: Babies, Brains and Bonding - 2000+ practitioners trained!

Stage(s) of maternity care pathway where good practice is focussed	Conception Antenatal Intrapartum Post-partum First year post birth
Summary description of initiative	The Infant Mental Health: Babies, Brains and Bonding (IMH:BBB) training day was developed initially to support and underpin the work of the Early Start Teams (health visiting and children's centre staff) and community midwifery across Leeds. The training focuses on infant neurodevelopment, attachment theory and promoting responsiveness and sensitivity in parents. The format of the training provides both a theoretical knowledge base and a space for practitioners to consider application of this in practice. Many practitioners may be experienced in attachment theory and/or recognising baby cues, however IMH: BBB extends this to explore how early relationships impact upon a baby's brain development and the importance of sensitive parenting for optimal social and emotional development in infants. The reason all stages of the maternity care pathway have been ticked for this good practice example is due to the ripple effect of training staff within all stages of the maternity care pathway on outcomes for infants and families. In February 2018 the Infant Mental Health Service (IMHS) celebrated having trained 2000 practitioners across Leeds in IMH:BBB! Professionals trained include community midwives, health visitors, social care practitioners, children centre staff, CAFCASS guardians, neonatal staff, perinatal mental health service staff and many more! This will therefore have impacts on the care that infants and families receive across the city in all areas of the maternity care pathway. The assistant psychologist role within the IMHS is crucial to supporting this training offer through organisation and delivery.

Background/context

Recognition of the importance of the rapidly expanding evidence base in the field of infant mental health and the need to share that information with practitioners means that training is a core part of our service offer. The IMHS recognises the need for practitioners who are working with infants and parents to be adept at promoting positive parent-infant relationships and identifying when things may be emerging as problematic. This is the premise upon which IMH:BBB was developed on to provide practitioners with the knowledge and understanding to be able to support parents and carers in forming secure attachment relationships with their infants.

Approach/methodology

The format of the training is a full day workshop-based session, delivered jointly by two members of the IMHS. The training includes interactive exercises, group activities and relevant video material. Hand-out packs are provided on the day to support the transfer of learning into practice. For some audiences, such as the family court magistrates, we tailor the material to provide a shorter briefing in place of the full day.

Results and evaluation

All attendees of IMH: BBB are asked to provide written feedback on the day. The evaluation questionnaire asks seven questions with a 6 point Likert scale (strongly disagree to strongly agree). The training day has evaluated consistently positively.
In the year 2017-18:

- 100% of participants felt like their personal objectives were met by the day
- 99% of participants reported the training as relevant to their job
- 100% reported that the trainers, training methods and materials were effective
- 100% reported the application process as efficient and the administrators helpful
- 100% said that they would recommend the course to others
- 100% reported they would be able to put what they had learned on the training into practice
- 99% said they would be able to share the information from the training with their service users

Key learning points and top tips	Although the IMHS is a small service, we aim to have a big impact and we do this through equipping and up-skilling our partner colleagues who are offering services across the maternity care pathway so that infant mental health is on everyone's agenda across Leeds.
Plans for spread	In the past year we have focused delivering IMH:BBB to specialist services including perinatal and neonatal services and adult mental health services (including forensic services and eating disorder services). It would seem that the majority of third sector services in Leeds have accessed the IMH: BBB training offer successfully. We consider bespoke training days when requested.
Do you have a patient or service user story you can share? If so, please provide details. (If the story is not anonymous please confirm that you have gained the service user's permission to share. Quotes from service users are useful)	Due to this case example being based on training staff I have included feedback comments that we have gathered on the day in relation to the training: "[The training] helped me consider the needs of children. Sometimes I get blinkered to the client's needs." "The course was very informative, made me realise relationships with babies are formed much earlier." "The content of the course has made me see things differently." "Really enjoyed this course [it] will be very helpful in my job and will recommend it." "Facilitators were really good at delivering the course and engaging the participants." "Really useful for working in adult mental health." "Bringing to life theories on attachment learnt a long time ago." "Fascinating. Really child-focused. The judicial system needs to know this! (Civil/contact cases too)."

For further information

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Baby Elsie[h]: Supporting Complex Parental Mental Health Difficulties

Stage of maternity care pathway where good practice is focussed	First year post birth
Summary description of initiative	Parents struggling with their mental health can, understandably, find it really hard to meet the needs of their children. By supporting parents to better understand their thoughts and feelings, we are able to support parents to support their babies. The consultant clinical psychologist based at the Infant Mental Health Service also spends half a day a week at the perinatal Mother and Baby Unit (M&BU) to offer support to parents and their infants on the ward.
Background/context	**Referral** Sally was admitted to the M&BU soon after Elsie's birth. She had low mood and suicidal thoughts and spent around two months on the unit as an in-patient. During this time, she was seen with her baby daughter by the IMH consultant clinical psychologist for some weekly therapeutic sessions. Sally was struggling to feel emotionally connected to Elsie. She felt she was unable to read Elsie's cues or care for her properly. She felt she was a bad mother and that Elsie would be better off in the care of her dad. Although Sally's mood improved during her admission, she still felt that her relationship with Elsie was poor and that she was bad mother. A referral to the IMHS was agreed as part of the discharge plan from the M&BU.
Approach/methodology	**Intervention** Sally was seen with Elsie as an outpatient by the same psychologist who saw her in the M&BU. Sally attended weekly appointments in a health centre to complete a 16 week course of Cognitive Analytic Therapy (CAT). The therapeutic work helped Sally to explore ways in which her early relationships and experiences in her childhood with her parents, siblings and step-father had had a big impact on her self-esteem and her expectations of herself in her

[h] Names have been changed to protect confidentiality.

relationships. She was able to reflect on the fact that the strategies she had developed to help her cope with stressful experiences as a child (such as the breakup of her parents' marriage), were no longer helpful patterns to be using as an adult and a parent. Furthermore, that her low mood and low self-esteem were linked to her early experiences. Armed with her new understanding of herself she was able to consider and try alternative ways of thinking and responding to challenging situations. Over time she was able to see that she was in fact providing a high standard of care to Elsie and that Elsie was thriving and making excellent progress.

Results and evaluation

Outcome

Sally's mood improved steadily, and she coped well with some challenging experiences, such as moving house and returning to her job as a social worker. Throughout these times Elsie continued to thrive and also coped well with the changes in the context of the sensitive and attuned care she was receiving from Sally and her partner Pete. At the end of the therapy Sally's PHQ9 mood scores and GAD7 scores had dropped to sub clinical levels. Sally was delighted with the progress she had made and reported feeling emotionally stronger than she had ever felt before. She reported increased confidence and enjoyment in her experience of being a mother to Elsie.

For further information

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4.14 Sonographers

Description of the role of sonographers in the maternity care pathway	Settings where sonographers work
During the pre-conception period: Sonographers can undertake: • fertility baseline scans &/or follicle tracking • hysteron-salpingo contrast sonography • fertility procedures e.g. egg retrieval, invitro fertilisation • checking the number of embryos and the foetal heart pulsations	Ultrasound department, gynaecology or fertility clinic. Fertility clinic
During the antenatal period: Sonographers undertake: • Early pregnancy scans (symptomatic cases, PV bleeding - ? miscarriage, ectopic, molar, multiple pregnancy) • Dating scans • Combined screening test for trisomies (11^{+2} to 14^{+1} weeks) as part of the Foetal Anomaly Screening Programme • Anomaly scans (18 to 20^{+6} weeks) as part of the Foetal Anomaly Screening Programme • 3^{rd} trimester scans for growth, placental localisation, assessment of blood flow, follow-up of previously detected abnormalities, multiple pregnancies • cervical length measurement, in cases of previous pre-term delivery • foetal heart pulsations at any point in gestation e.g. 3^{rd} trimester reduced foetal movements • Interventional procedures e.g. chorionic villus sampling or amniocentesis • deep vein thrombosis scans if symptoms exist • abdominal scans or other ultrasound examinations, if symptomatic e.g. renal tract, gallbladder	Antenatal clinic Ultrasound department / antenatal clinic / day assessment unit / foetal medicine unit

During the post-partum period and up to one year post birth:

Sonographers undertake:

- Gynae scans for retained products of conception.
- Gynae scans for follow-up of antenatally detected gynae pathology e.g. cysts

Ultrasound department

Up to one year post birth:

Sonographers undertake:

- neonatal ultrasound scans e.g. head, hips, renal, abdominal, spine
- other examinations for symptomatic cases and/or follow-up of antenatally detected abnormalities

Ultrasound department

Good practice examples – Sonographers

Antenatal ultrasound

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	A day in the life of an obstetric sonographer
Background/context	All pregnant women are offered two scans in pregnancy. Many pregnancies also have additional scans for a variety of reasons such as assessing growth, checking the position of the placenta and assessing for previously detected abnormalities.
Approach/methodology	Sonographers generally complete a minimum of a 12 month post graduate certificate from a Consortium for the Accreditation of Sonographic Education (CASE) accredited programme. As part of the qualification they have to undergo clinical competency assessments. Once qualified they practice a range of examinations, often including obstetrics and gynaecological scans. These can include fertility scans, pregnancy scans and post-natal scans on the mother or in some cases child.
Day in the life of an obstetric sonographer	On an average day a sonographer can scan between 15 to 25 patients. Many units have mixed lists, including a range of different examinations, to ensure that sonographers' risk of work related musculoskeletal injuries is minimised The day may begin with early pregnancy cases, where woman attend for a scan because they have symptoms of pregnancy complications. Complications are often pain and/or bleeding. Sometimes a sonographer can offer reassurance and good news, however often the findings are not as clear. The scan may not be able to demonstrate an intra-uterine pregnancy, in this case it may be too early in the pregnancy to see, so a rescan would be needed. Alternatively, the symptoms may be caused by a miscarriage or ectopic pregnancy. These findings need careful, sensitive explanation to the patient.

The next patient might be for an anomaly scan (18 to 20 weeks + 6 days). This is where we are assessing the foetus for, as a minimum, the 11 auditable conditions stated by the Foetal Anomaly Screening Programme (FASP), which include spina bifida and heart defects. Often the parent and partner attend for the examination and after a clear explanation the sonographer can spend up to 30 minutes carrying out a series of checks during the scan. The structure of the foetus is carefully examined, along with the placental position, foetal movement, fluid around the foetus and the mother's uterus and surrounding structures. This scan can be an anxious time for parents, as many are aware that the examination is to look for and hopefully rule our abnormalities. Additionally, the scan is also an exciting time. Parents want to enjoy the experience of seeing their developing baby, possibly find out the sex and obtain a picture. The sonographer has to balance the diagnostic part of the examination with the parents' desire to be guided through the scan.

Dating scans are performed within the list, these are to date the pregnancy, check for early structural abnormalities and also, if the woman opts for it, to screen for syndromes such as Down's, Edwards' or Patau's syndrome. This includes measuring a very small area of fluid at the back of the foetal neck. Accuracy is crucial for this nuchal translucency test, as 0.1mm could make the difference between a higher and lower chance of having Down's syndrome. There are added complications, in that often the foetus is either curled into a tight ball making it difficult for the sonographer to get to the area or may be highly active, so a quick reaction time is needed to freeze the image in the correct section without any blurring. It can be like trying to capture a clear photograph of a formula 1 racing car as it speeds past. It has not been unknown for a patient to attend for a dating scan only to find that the pregnancy has miscarried or occasionally, dating scans have been performed and the pregnancy is an ectopic (outside the womb). On other occasions a woman attends for a dating scan to find that she has a multiple pregnancy. This is equally challenging for the sonographer to communicate the findings, sometimes a multiple pregnancy is good news and in other instances it is much less positive for the parents, in almost all cases it comes as a shock.

Growth scans are becoming more common in the third trimester (after 24 weeks of pregnancy). With changes to national guidelines, the increase in obesity levels nationally and women are having children at an older age many more pregnancies are classed as high risk.

Initiatives to include more scans in the third trimester for high risk pregnancies are aimed at improving babies lives and reduce complications at delivery. Multiple pregnancies are also at higher chance of having complications, so will have many more scans during the gestation period. Scans carried out in the third trimester include growth scans, to check the growth of major structures; the head, abdomen and femur. These are plotted on individual growth charts to monitor the growth profile of the pregnancy. Sonographers also assess the wellbeing of the pregnancy at this scan, recheck structures which are now much larger, particularly the heart which measures only about 2 cm at the anomaly scan, look at the blood flow to the foetus and placenta to assess whether there are any possible complications with the blood supply which might impact on the pregnancy. The cervix might also be measured in cases of preterm delivery in past pregnancies, as a short cervix increases the risk of further pre-term delivery.

When women come to the early pregnancy assessment unit, they often have symptoms of pregnancy loss or complications. However, when they attend the routine scans in pregnancy, they are past the 12 week stage, when many miscarriages occur. As the chance of miscarriage reduces by 20 weeks women are often not expecting to be told difficult news. Delivering this difficult news requires sensitive, honest and empathetic communication skills from the sonographer. There are also times when the sonographer is not fully aware of the implications of the findings. It can be very difficult to answer questions from the anxious parents in these situations. Clear communication of what happens next and who can provide further information is essential. It is important for sonographers to work closely with a wide range of clinical colleagues to ensure the patient gets support from the most appropriate member of the team. Following delivering difficult or complex and upsetting news a sonographer then has to deal with their own emotions very quickly, turn around and greet the next patient with a smile and start a whole new examination. The sonographer’s emotions have to wait a while, as their scanning list is usually running behind after dealing with a complication during a previous scan. Appropriate support or talking to colleagues at the end of the list can help sonographers manage the cycle of delivering both happy and difficult news during a normal working day.

For your information

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Multiple Pregnancy Ultrasound Care Pathway

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	The specialist multidisciplinary team for the care of women with a multiple pregnancy
Background/context	The incidence of multiple pregnancies has increased over the years mainly due to the efficacy and accessibility of assisted reproductive techniques (ARC) NICE states that all women who are having a multiple pregnancy should have access to a specialist team as their pregnancy will need significantly more monitoring. Therefore, women having twins, triplets or more are all monitored during their pregnancy using ultrasound looking for specific potential problems at different gestations (NICE Sept 2011 and NICE shared learning database 2013).
Approach/methodology	As imaging and management become better in multiple pregnancies, so are the outcomes for these babies but it is clear that not all women have access to specialist teams in the UK. In those units that have introduced a specialist team it involves incorporating midwives, sonographers and consultants but many other specialties maybe involved too if required i.e. physiotherapists, dietician, peri-natal mental health, infant feeding. The sonographer that diagnoses a multiple pregnancy (that maybe a spontaneous conception rather than IVF) has to check viability and then sensitively give the news to the parents. This is not always greeted with excitement and delight, more often it is shocking for the parents. The sonographer then has to check for the chorionicity of the pregnancy as this is key to determining the care pathway that the woman will be placed on (dichorionic /monochorionic). With monochorionic pregnancies the babies share one placenta and are at far higher risk of developing complications and therefore require more intensive monitoring. At this stage of the pregnancy screening for Trisomy 21 (Downs syndrome), Trisomies 13 & 18 (Patau's and Edward's Syndromes) is offered. Scanning the nuchal translucency can be

very challenging as the measurements can often be as small as 1- 1.5 mm. The sonographer will then counsel the woman appropriately for these conditions again dependent on the chorionicity of the pregnancy, Non Invasive Prenatal Testing (NIPT) also has to be considered and the limitations with twins if there is a high chance result.

A basic anatomy scan is also conducted of each baby along with dating the pregnancy using the crown rump length of the larger twin.

Each woman will have a different number of scans depending on the chorionicity.

Monochorionic twins

If her twins are monochorionic then she will have

12 scans (every 2 weeks from 16 weeks until delivery)

The sonographer has to be aware that she is screening for twin to twin transfusion syndrome between 16 to 24 weeks and then twin anaemia polycythaemia and selective foetal growth restriction using foetal growth discordance %, along with foetal dopplers (Umbilical Artery Pulsatility Index (UAPI) and Mid Cerebral Artery MCA).

For Twin to Twin Transfusion Syndrome (TTTS) the sonographer will be looking at any liquor discordance / size discordance and foetal bladder filling.

For polycythaemia the sonographer will be looking at the foetal growth and also the peak systolic velocity (PSV) of the MCA angle corrected to obtain the value of the blood velocity which determines whether or not a foetus is possibly anaemic. This occurs in approximately 2% of monochorionic pregnancies and usually occurs after 24/40 and can happen after laser ablation.

For growth discordance – likely due to unequal sharing of the placenta is given as a % (see Dichorionic)

Dichorionic twins:

If her twins are dichorionic she will have 4 weekly scans after the anomaly scan until delivery. Here the sonographer will be monitoring for growth velocity and any discordance given as a % – this involves the foetal dopplers (MCA and UAPI).

The evidence suggests that if there is a growth discordance of > 25% then the outcome is more guarded and referral to FMU is arranged for the twins' consultant to counsel and scan if required

There is also the routine aspect of scanning for each foetus - for detailed views of the foetal anatomy, adhering to the demonstration of the 11 auditable conditions listed by FASP (foetal anomaly screening programme)

If spontaneous triplets are diagnosed, they are referred to the FMU consultant team for further management. If they are uncomplicated then the sonographers within the twins' team will scan the mother.

This specialist team works cohesively together whereby the mother is seen for her scan (30 mins scan time for nuchal translucency (NT), growth or TTTS assessment, an hour is given for a twin anomaly scan) and then by the twins' midwife. If there are any complications, then the twins' consultant is also available in the clinic.

As the parents are seeing the same people within the team a good rapport and relationship quickly develops. With continuity of care there is known better outcome. The same sonographers gives good intra-rater reliability for consistent accurate measurements. This means that the clinicians can depend on the accuracy of the results, it also allows support to confirm findings and with joint support for the professionals it allows acknowledgment of limitations in practice

As multiple pregnancies are of high risk, sadly there is sometimes foetal demise. Each mother is scanned after a laser procedure to determine viability and the consultant is likely to conduct this scan. Foetal demise, however, this can also occur spontaneously and breaking this news

will be by the sonographer (U/S will be used to confirm demise) This is devastating to the parents and has a significant effect on the sonographer.

Within the realms of any clinic for sonographers the next patient is waiting, and a fresh positive face has to be adopted with no recovery time factored in for the sonographer.

Growth pattern:

Twins are logically going to grow at different rates compared to those of singletons. Most centres in the UK still use singleton charts to plot and monitor growth of their multiple pregnancies.

A select few use the new twins' charts devised by research through the STORK research team (Southwest Thames Obstetric Research collaboration). These new charts are used in association with the chorionicity which reflects a different growth pattern in multiple pregnancies compared to those of singletons.

Foetal growth reference ranges in twin pregnancy: analysis of the Southwest Thames Obstetric Research Collaborative (STORK) multiple pregnancy cohortStirrup OT et al Ultrasound Obstet Gynecol.2015 Mar;45(3):301-7. doi: 10.1002/uog.14640. Epub 2014 Aug 25.

Results and evaluation

The results of a specialist team have been highly praised for the care afforded to these women.

Twins and multiple births foundation (TAMBA) /Multiple Births Foundation (MBF)

For your information

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4.15 Speech and language therapists

Description of the role of speech and language therapists in the maternity care pathway	Settings where speech and language therapists work
During the pre-conception and antenatal period: • Speech and language therapists identify and work with individuals with communication difficulties, enabling those individuals to communicate effectively and advising and supporting others to do the same. • Speech and language therapists provide training in speech, language and communication (SLC) development to health professionals, such as health visitors and other early years practitioners, who work with expectant families to deliver public health messages **During the post-partum period and up to one year post birth:** • Speech and language therapists support inclusive communication to help benefit service users including parents and other family members, carers and colleagues across agencies and disciplines working with and for people with communication support needs. • Speech and language therapists (SLTs) provide specialist assistance to babies and children who have feeding, swallowing and speech, language and communication needs as part of another condition, for example children born with cerebral palsy and downs syndrome.	Acute hospital setting, outpatient clinics, community clinics, nurseries and schools

Good practice examples – Speech and Language Therapists

Working with women who are pregnant and have a learning disability

Stage of maternity care pathway where good practice is focussed	Antenatal
Background/context	I have worked with some women who are pregnant and have a learning disability over the last 10 years in my role as a speech and language therapist working within the Learning Disability Service. My input doesn't happen often, but it is important to note that on most occasions staff do not realise the full extent of the person's speech, language and communication needs, (SLCN). My main role has been to identify the best communication approach for professionals and staff to ensure the person understands their information. I provide a report about their SCLN which I go through with the woman and give to relevant professionals, so they are aware of the SLCN. Often they are women who may present as having a good understanding of language within their daily lives. However once assessed most do need extra support due to this change in their lives which can range from: Advice to staff such as: preparation of topic when discussing an idea, a topic or contentious issues with her, use of structures which are shorter, breaking longer sentences into two shorter sentences, quiet environment, encourage woman to ask questions etc. Staff to encourage the woman to talk about the subject so they can check she has understood fully. The woman learning how to use her phone to have a reminder for appointments etc.

	Encouraging staff to use visual materials, such as written words, photographs and pictures to introduce the topic and to help the person remember the information.
Examples of material produced/resources used	Booklets made more accessible- for example in conjunction with midwife My baby's movements and Ways to make labour easier.
For further information	
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Communication Assessment and Recommendations for Staff

Stage of maternity care pathway where good practice is focussed	Antenatal
Summary description of initiative	Completion of a baseline communication assessment and providing staff involved in antenatal/postnatal care with best practice recommendations to support the service user's communication.
Background/context	The service user has a mild Learning Disability and personality disorder. There are a number of agencies and professionals involved in pre-birth planning and obstetrics care. A referral was made by the community learning disability nurse to speech and language therapy to complete a baseline communication assessment and advice for professionals on how to best support the service user with her communication. This includes making sure she understands the information provided, for instance, by the midwives.
Approach/methodology	Service user's communication was informally assessed by Speech and Language Therapy through discussions with the service user and nurse, and formally assessed using the Test for Reception of Grammar-2 (TROG-2), subsections of the Mount Wilga High Level Language Test and a Social Understanding Screening Tool. Assessment was completed over two sessions of one hour.
Results and evaluation	The service user demonstrated good attention, listening and non-verbal communication skills, and a good understanding of general conversation. She understood 4 key word level sentences (e.g. there is a long pencil and a red ball) and other grammatical structures. However, she struggled to understand more complex sentences (e.g. centre-embedded sentences). Auditory memory and comprehension was mildly impaired, meaning there were times she omitted or misunderstood details from verbal information. She understood social rules and situations including people's thoughts and feelings well and had good planning and sequencing skills. She could express herself clearly and fluently using full sentences. She experienced occasional word-finding difficulties, however, could

	appropriately describe what she meant to say as a strategy. She was assessed as having a moderate impairment in providing verbal explanations, with incomplete responses and a tangential response, where she required some prompting to return to the topic. The service user said she did not like it when people talk to her in a patronising way and that she liked information to be provided in Easy Read form to support her understanding. She would benefit from staff following Speech and Language Therapy recommendations to support her communication. These were discussed with the service user and she agreed she would like staff to support her in this way (see below)
Key learning points and top tips	1. Speak **clearly** and use **simple language** E.g. Instead of 'the road the hospital is on is closed, so you have to walk there', say 'the road is closed, so you have to walk to the hospital.' 2. **Avoid very lengthy sentences** i.e. try to not to use over **4 key words per sentence** E.g. 'Put the tea on the table, and the biscuit in the jar' 3. **Explain** and **repeat** information that is new or complex 4. Use **visual support** e.g. gesture, pictures and objects to support your speech 5. Ask questions to **check X has understood**. Consider offering multiple choice options. E.g. 'So what time are we meeting?' / 'Are we meeting at 2pm or 4pm?' 6. **Do not interrupt** X while she is speaking. 7. If required gently **prompt X** to re-focus and return to the topic of conversation. 8. **Do not** talk to x in a **patronising** way. 9. Provide important information in **Easy Read** form (refer to the Easy Read guidance, Department of Health for further information).
Examples of material produced/resources used	Easy read summary of SLT report provided to the service user

	Recommendations highlighted in SLT report and shared with professionals involved in antenatal/postnatal care.
For further information	
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Supporting adults with learning disabilities through pregnancy, childbirth and parenting

Stage of maternity care pathway where good practice is focussed	Conception Antenatal Intrapartum Post-partum First year post birth
Summary description of initiative	SLT works within Community Learning Disability Team together with community nurses and occupational therapists to support adults with learning disabilities (ALD) to understand information given, follow advice and be able to express their views. ALD team work closely with midwives, specialist midwives, health visitors and social workers to ensure reasonable adjustments are made and to promote health and well-being of mother, father (if appropriate) and baby.
Background/context	Health inequalities for people with learning disabilities can mean that they are not able to access services they need, and assumptions can be made about a person's ability to parent because information is not presented in the best way for the individual and reasonable adjustments are not made. Specialist LD professionals can work with primary health care to support others to make reasonable adjustments and to ensure the person with learning disabilities and their baby receive the best care possible. Information during pregnancy and to enable a person to care for a baby can be complex and a lot of information can need to be communicated at once, SALT can advise on the use of easy read information and the person's individual communication needs to ensure communication is effective.
Approach/methodology	• Assessment of individual's communication needs • Communication report and/or communication passport written and shared with other professionals

	• Liaison with other professionals and easy read information produced for the individual e.g. How to keep healthy during pregnancy, what to expect during childbirth, how to interact with your child, weaning etc • Support provided for individuals involved in the Child Protection process and parenting assessments including providing easy read information about the process, supporting with understanding of meetings and understanding assessment reports. • Several attempts have been made over the years to put together a multi-agency pathway to improve communication and liaison between services. Information has been gathered but lack of "buy-in" from all services has prevented this work from moving forward.
Results and evaluation	Evaluation is only on an individual basis and results vary greatly across individuals and services.
Key learning points and top tips	• LD services need to be involved as early as possible, not just when problems start to arise • Making reasonable adjustments is everyone's responsibility not just that of the LD professionals • Good partnership working, and regular liaison can produce great results for individuals Top tips • Use simple, straightforward language • Check understanding by asking person to repeat back what they have been told (not asking Do you understand? To which most people will say Yes) • Use pictures to help people understand and remember information
Plans for spread	Will continue to work on individual basis
Examples of material produced/resources used	Will be able to provide examples of materials produced but not within this timescale. Your Baby - produced by Change Picture Bank is a good resource

For further information

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Speech and Language Therapists working in the Learning Disabilities Parenting Team

Stage of maternity care pathway where good practice is focussed	Antenatal Post-partum First year post birth
Summary description of initiative	The team consists of 0.5 wte highly specialist SLT and 0.5 wte clinical psychologist. The purpose of the service is to work alongside social workers, family aides, midwives, health visitors and any other stakeholders who are working with parents who have a learning disability who have children on child protection or child in need plans.
Background/context	The aim is to help others understand the impact of a cognitive and/or communication disability on the ability to work successfully with the child protection process and help social workers et al make reasonable adaptations to maximise the effectiveness of their communication. Our ultimate focus is the child, so we are not advocating specifically for the parent, but work to support timely decision making through a better understanding of the parent's communication needs and, where possible to develop parenting with support.
Approach/methodology	We are short to medium term and we are an assessment and consultation service. We will carry out communication and cognitive assessments where necessary and will work with the whole team around the child and the parent. We will often find that whole team consultations are very useful opportunities for the various professionals involved in the case to look afresh at the reasons for engagement difficulties or breakdown, and/or to reflect on how to break this deadlock. This can involve reframing our understanding of the parent through the prism of a cognitive impairment and considering the significant impact of a communication impairment for the parent involved in the child protection/child in need process. We prefer to be involved earlier on where there are concerns about parenting and therefore our work will bring us into contact with pregnant women who have child protection for their unborn child.

We attend social services panels, child protection conferences and are available for comment in court. We work across West Sussex

We carry out training programmes and reflection sessions for workers who are supporting these parents through the process, looking at the impact of communication and cognitive impairment.

As part of our process, we will look to signpost to other services (e.g. Community Learning Disabilities Teams and/or mental health services.

Recently we were selected as one of three centres of positive practice for supporting parents with a learning disability by the Norah Fry institute, which is attached to University of Bristol.

The full research document can be accessed here: http://www.bristol.ac.uk/media-library/sites/sps/documents/wtpn/GTC%20SUMMARY%20REPORT%2016.5.2018%20designed.pdf

Plans for spread

We aim to work further into the child protection conference process to facilitate best practice in communication support at conference and core groups.

We would like to expand our communication/cognition training programme throughout teams in West Sussex.

We are looking at further ways that we can link in with prevention teams, such as the Integrated Prevention and Earliest Help teams and Pause, a pilot project which works with women who have had multiple removals to look at alternatives to further pregnancies.

We are currently beginning to facilitate the writing a protocol between adult and children's services for managing these cases and the often complex and competing interests of the parent and child, as perceived by services.

For further information

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