Management of Babies Born to Mothers Requiring Psychotropic Medication during Pregnancy

This document sets out to standardise and optimise the care given to newborn term babies when their mothers have taken psychotropic medication during pregnancy,

Introduction

Around 15% of all pregnant women suffer from a significant mental health problem leading to around 10 -13% of babies exposed in utero to psychotropic medication[1]. The most common risk to babies exposed to antenatal psychotropic drug use is poor neonatal adaptation syndrome (PNAS). Other risks such as the increased risk of malformations and incidence of preterm birth are uncommon.

In case of a mother taking psychotropic medication, the following points should be taken into consideration at the midwife booking appointment:

- provide parent information leaflet (Appendix 3)
- referral to local perinatal mental health team if threshold met
- if threshold not met, GP to review psychotropic medication and discuss taking in pregnancy and whilst breastfeeding

Any antenatal plans for postnatal management of the newborn should be communicated to the paediatric team and reviewed and acted on by the midwifery and paediatric teams following delivery.

Poor Neonatal Adaptation (PNA)

Symptoms of PNA are caused by exposure to psychotropic drugs. The underlying aetiology is unclear but thought to be due to withdrawal of drug after delivery (all psychotropic medication crosses the placenta - onset usually within 8 hours), toxicity (apparent immediately after birth) or a combined effect[2].

Symptoms of PNA

PNA symptoms are summarised in Table 1. PNA is a diagnosis of exclusion – do not assume the symptoms seen are due to maternal medication and exclude other causes first (sepsis, hypoglycaemia, electrolyte disturbances, polycythaemia). Any symptomatic infant should have a **FBC, U&E, Ca^{2+}, Mg^{2+}, and blood gas (ionised calcium), as well as an infection screen if any red flags for infection or meeting the criteria as per EOS risk calculator**.

Symptoms occur mainly in the first 48 hours and most babies present in the first 24 hours[2, 3]. In most babies symptoms are mild. If PNA symptoms do not occur in the first 48 hours after birth, development of PNA is very unlikely. If symptoms occur, they usually resolve by 72 hours, but it can take longer (up to a week). Some studies suggest that breast fed babies are less likely to develop PNA[3].

	Common Symptoms	Rare Symptoms
Neurological	Jitteriness or tremors/myoclonus Hyper or hypotonia Sleeping difficulties High pitched cry or frequent crying Agitation and irritability	Convulsions Hyperreflexia Lethargy
Gastro-intestinal	Feeding difficulties	Diarrhoea Uncoordinated/ weak sucking Vomiting/regurgitation
Respiratory	Respiratory distress	
Autonomic		Temperature instability Mottling Excessive sweating Nasal congestion

Table 1 Symptoms of PNA

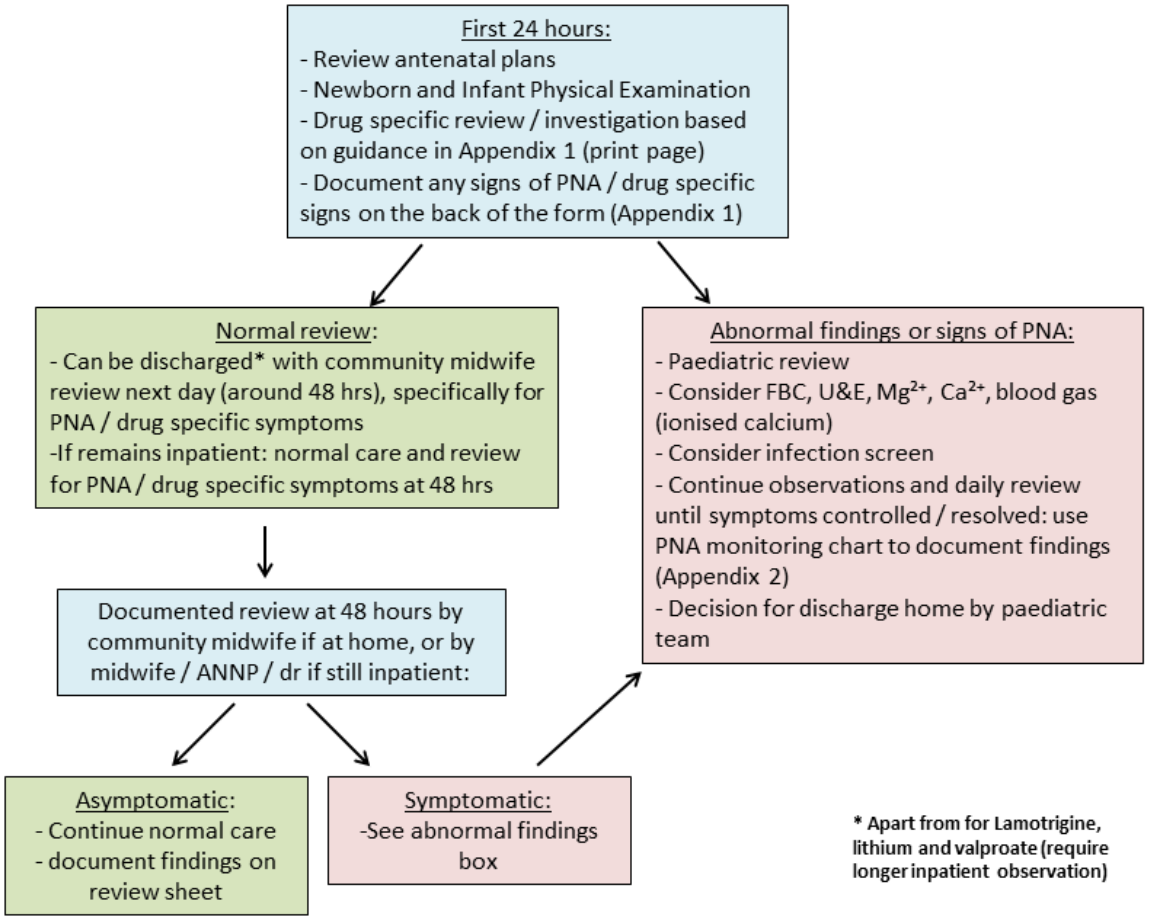
Management

The exact monitoring and management of the baby will depend on the type of psychotropic medication taken by the mother (see Appendix 1). The **flowchart below** will guide management. Be aware that if expectant mothers are taking both opioid and psychotropic medications together the risk of withdrawal is increased and the NAS symptoms appear to be more severe. Therefore PNA (48 hours) and NAS observations (5 days) should be performed concurrently.

The baby should remain with the mother unless a safeguarding alert says otherwise, or a medical decision is made to admit the baby.

All infants should undergo a full newborn and infant physical examination (baby check) in the first 24 hours, with particular attention to the spine, palate, cardiovascular system, and review of the antenatal scans.

Interventions to be considered are assessment and monitoring of the baby by the post-natal team, communication with the baby's family and healthcare practitioners, information sharing and consideration of any safeguarding concerns.



Breastfeeding

Most of the maternal psychotropic drugs are present in breastmilk, but in the majority of cases taking these medications is not a reason to stop breastfeeding (see Appendix 1). The clinician should be familiar with the antenatal plan for infant feeding before starting the newborn and infant physical examination (NIPE, baby check), and support the family with breastfeeding if this is appropriate and what the mother has planned for. Successful, well supported breastfeeding is a positive indicator for maternal mental health outcomes. Thus, mothers with existing mental health issues should be identified early as requiring additional breastfeeding support. Early input from a lactation specialist should be arranged if breastfeeding issues arise.

No changes or advice should be given to the mother with regard to their psychotropic medication. This should be managed by their psychiatrist or GP, but discuss with the psychiatrist or GP if queries or concerns are raised.

References

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LActMed – Drug and Lactation database:
https://www.ncbi.nlm.nih.gov/books/NBK501922/ (accessed Dec 2018)
https://www.gov.uk/guidance/valproate-use-by-women-and-girls MHRA guidance (accessed Nov 2019)

Appendix 1
Drug Specific Guidance
(Please record reviews on day 1 and 2 of life)

Antidepressants

SSRIs: Citalopram, escitalopram, fluoxetine, paroxetine, sertraline

SNRIs: Venlafaxine, duloxetine

TCAs: Amitriptyline, clomipramine, dosulepin, doxepin, imipramine, lofepramine, nortriptyline, trimipramine

MAOIs: Phenelzine, isocarboxazid, tranylcypromine (rarely prescribed), Moclobemide

Breastfeeding Information

- All **SSRIs, SNRIs and TCAs** are present in breast milk but amount probably too low to be harmful – **Advice is to breastfeed.** With the exception of **Doxepin** which accumulation of metabolite may cause sedation and respiratory depression**.**
- There is a lack of published data on the safety of **MAOIs** and breastfeeding **– therefore advice is to avoid breastfeeding.**

Assessment and Monitoring

- **Risks:** PNA (poor neonatal adaptation), congenital cardiac defects, jaundice, hypoglycaemia. **SSRIs:** risk of persistent pulmonary hypertension of the newborn (PPHN) → check pre-and post-ductal saturations.
- **Symptoms and signs of PNA can include:** insomnia, restless sleep, sedation, poor sucking, irritability, vomiting, diarrhoea, agitation, jitteriness, increased tone, fever, hypothermia, temperature instability,
  hypoglycaemia, respiratory distress, nasal congestion, excessive sweating, convulsions and acrocyanosis.
- Low threshold to measure blood sugar and bilirubin.

Antipsychotic Medication

First generation 'typicals': haloperidol, chlorpromazine, promethazine, flupentixol, trifluoperazine, promazine, sulpride, zuclopenthixol
Second generation 'atypicals': amisulpride, aripiprazole, clozapine, quetiapine, olanzapine, risperidone, paliperidone

Breastfeeding information

- Antipsychotic medications do enter the breastmilk, but levels are generally low, and breastfeeding can be advised.
- Breastfeeding is contraindicated in **clozapine** (risk of seizures and agranulocytosis)
- Aripiprazole may lower prolactin levels in mother affecting milk supply

Assessment and Monitoring

- Babies exposed to antipsychotic medications are at risk of extra-pyramidal signs and symptoms. If any of these signs are observed, please discuss with the paediatric team with regards to further assessment:
  - **Abnormal muscle movements (dystonia)**
  - **Tremors**
  - **Increased tone**
  - **Motor restlessness (constantly moving)**
  - **Sedation: drowsiness, poor feeding / suck, not waking for feeds**
  - **Poor sucking**

- **Clozapine**: risk of maternal agranulocytosis (if present, consider testing infant – d/w consultant); can lead to a larger maternal appetite: ↑ risk of diabetes and hence infant hypoglycaemia, low threshold for monitoring infant blood sugar.

Anxiolytics and hypnotics

Benzodiazepines

Long acting: diazepam, clobazam, clonazepam, nitrazepam,

Shorter acting: lorazepam, temazepam, oxazepam

Beta Blockers: Propranolol

Breastfeeding Information

- Breastfeeding is advised.

Assessment and Monitoring

- **Benzodiazepines** used in third trimester of pregnancy may increase risk of neonatal withdrawal syndrome – refer to NAS guideline

- **Beta Blockers:** risk of congenital malformations (neural tube defects, cleft lip and palate, cardiac), bradycardia, hypotension, respiratory distress → check and document **heart rate and blood pressure** in neonate, ECG if found to be bradycardic, monitor for **hypoglycaemia** as per hypoglycaemia guideline.

Other Hypnotics

Drug examples: zopiclone, zolpidem, zaleplon

Breastfeeding Information

- Zolpidem and zaleplon are regarded as safe in breastfeeding. Little data on zopiclone, therefore advise mother to ask her doctor for an alternative if breastfeeding.

Assessment and Monitoring

- Observe for sedation: drowsiness, poor feeding / suck, not waking for feeds.

Mood Stabilisers: Lamotrigine

(requires at least 24-hour inpatient observation)

Breastfeeding information

- Taking Lamotrigine is not necessarily a reason to discontinue breastfeeding because many infants have breastfed without adverse reactions.
- Infants should be carefully monitored for side effects such as apnea, rash, drowsiness or poor sucking.
- If there are any concerns a serum level should be taken to rule out toxicity.
- If a rash occurs, urgent medical attention should be sought through A&E and breastfeeding discontinued until the cause is found.

Assessment and Monitoring

- **Risks:** sedation, rash, apnoea, congenital malformations.
- Newborn infant physical examination with special attention for any possible **congenital malformations, rash, lethargy, poor feeding, apnoeas** in the **first 24 hours of life**. In the majority of cases, if well, can then be discharged home **after 24 hours**.

Mood Stabilisers: Lithium

(needs 48-hour inpatient observation period)

Breastfeeding Information

- We would **not recommend** for a mother to breastfeed whilst taking Lithium.

Assessment and Monitoring

- **Risks:** congenital cardiac defects, floppy infant syndrome (occurs shortly after birth, esp. if mother taking lithium 24-48 hrs. prior to delivery or if she is dehydrated), hypothyroidism (ensure day 5 blood spot done), nephrogenic diabetes
- Monitor for **floppy infant syndrome signs for minimum of 48 hrs.**: lethargy, flaccid muscle tone, hypotonia, respiratory distress, cyanosis (use NEWTT chart)
- Measure **lithium levels and electrolytes** in infant shortly after delivery in view of risk of lithium toxicity and hypernatraemia.

Mood Stabilisers: Valproate

***This medication should not be prescribed for women with mental health problems who are pregnant or of child-bearing age**
*** Note MHRA guidance:** https://www.gov.uk/guidance/valproate-use-by-women-and-girls

Breastfeeding Information

- There are relatively low levels of Valproate found in breastmilk.
- **Women can breastfeed** whilst taking this medication but monitoring of infant serum valproate levels, platelets and liver enzymes should be considered.
- The mother taking Valproate alongside other mood stabilisers or antipsychotics may cause infant sedation or withdrawal reactions.

Assessment and Monitoring

- **Risks:** Congenital malformations (10%): spina bifida, cardiovascular malformations (ASD), cleft lip and palate, hypospadias, polydactyly, craniosynostosis. 30-40% will have developmental problems long-term
- Newborn infant physical examination with special attention for any possible **congenital malformations/lethargy/poor feeding**.

Mood Stabilisers: Carbamazepine

Breastfeeding information

- Taking Carbamazepine is not a reason to discontinue breastfeeding.
- Carbamazepine has relatively high levels in breastmilk and breastfed babies have serum levels that are measurable, but usually below the mood stabilizer therapeutic range.
- Most infants have no adverse reaction, but sedation, poor sucking, withdrawal reactions and cases of hepatic dysfunction have been reported: monitor LFTs if decision to breastfeed.

Assessment and Monitoring

- Risks: Congenital malformations (neural tube defects, cleft lip and palate, cardiovascular and urinary tract malformations), and sedation / poor feeding.
- Monitor for **sedation**: drowsiness, not waking for feeds, poor feeding.
- Exposure to **carbamazepine** can lead to liver dysfunction as well as an increased risk of Haemorrhagic Disease of the Newborn – **ensure IM Vitamin K given.**

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Review Form

Please check for Poor Neonatal adaptation Syndrome Signs / Symptoms. If any present, please discuss with the Paediatrician:

Insomnia/restless sleep, poor sucking, significant/persistent vomiting, diarrhea, tremors/jitteriness, fever, hypothermia, nasal congestions, signs of respiratory distress, blue lips, blue extremities, other concerns.

Please confirm a review in the first 24 hours of life

Place patient sticker here

Date Time Name of person checking

Midwife/Nursery Nurse/ANNP/Doctor

Signs/Symptoms found:

Please sign to confirm paediatric team contacted if signs/symptoms found: Date & Time:

Please confirm review on day 2 of life

Date Time Name of person checking

Midwife/Nursery Nurse/ANNP/Doctor

Signs/Symptoms found:

Please sign to confirm paediatric team contacted if signs/symptoms found: Date & Time:

APPENDIX 2

Poor Neonatal Adaptation Syndrome (PNAS) Inpatient Monitoring Chart

Please use this chart alongside the routine neonatal NEWTT Chart. Record observations 4 hourly.
If any of the following signs/symptoms are observed, please discuss with the paediatric team

Patient Sticker

Date & Time:							
Name / Signature:							
Insomnia/restless sleep							
Poor sucking							
Significant/persistent vomiting							
Diarrhoea							
Tremors/jitteriness							
Fever							
Hypothermia							
Nasal congestion							
Signs of respiratory distress							
Blue lips							
Blue extremities							
Other symptoms							

I need to take medication for my mental health during pregnancy – what does this mean when my baby is born?

Women need to take medication for many different physical and mental health problems during pregnancy. You have been given this leaflet as you and your doctor decided that it would be safest for you to take medication for your mental health during pregnancy. This includes **antidepressants, antipsychotics and anti-anxiety medications.** Some babies can experience symptoms after birth because of these medicines. For this reason, your baby will have a physical health check within 24 hours of birth. You should not worry about this – even if babies do develop symptoms these usually settle down within a few days without the need for any treatment

Do I need to do anything when I am pregnant?

- Make sure you tell the people involved in your care what medication you are taking.
- Don't stop or make any changes to your medication without talking to your doctor first.
- Take medication regularly and make sure you don't run out – if this happens make sure you talk to your GP or psychiatry doctor about what to do.
- Your doctor will tell you about any symptoms your baby might experience.

What about after my baby is born?

- If you give birth in hospital a health professional will check your baby just after birth (usually within the first 24 hours) to make sure that he/she is not experiencing any physical health problems.
- The reviews will include checking your baby's alertness and looking for any signs of irritability or distress, testing his/her movements for any stiffness or floppiness as well as listening to the baby's heart and lungs.
- You will also be asked if you have any worries about your baby's wellbeing, including how he / she is settling, feeding and sleeping.
- The check will not take long and is not harmful or painful for your baby.
- Any concerns found with your baby will be discussed with you and whether these are due to medication or other causes. The health professional will then explain any investigations or treatment needed.
- You will receive a letter telling you any symptoms you should look out for and what to do if your baby develops any of these.
- If you go home from hospital within 24 hours, or have a home birth, your baby will be examined again on the second day of life by a community midwife.
- You will be supported to feed your baby however you choose to feed.

Who should I speak to if I'm worried about my baby's health?

- If you are worried about your baby, speak to your GP, midwife or health visitor.
- If at any time your baby appears unwell, drowsy or has feeding difficulties you should see your GP or take him/her to A&E.

Further information about medications in pregnancy can be found at:
BUMPS (Best Use of Medicines in Pregnancy): https://www.medicinesinpregnancy.org/
Royal College of Psychiatrists: https://www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/planning-a-pregnancy