

Maternity Services

Epilepsy In Pregnancy, Labour and Postnatal period - Management

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1.0 Purpose of protocol

The purpose of this protocol is to provide guidance for midwives, general practitioners, obstetricians and specialist physicians on the management of women with epilepsy in pregnancy and the postnatal period. Information is also provided on the importance of pre—conceptual counselling.

2.0 Background

Epilepsy remains the commonest serious neurological disease, and every year there are an estimated 2500 pregnancies in the UK in women with epilepsy (UK and Ireland Epilepsy and Pregnancy Register 2016). There remain concerns regarding the incidence of Sudden Unexplained Death in Epilepsy (SUDEP) in pregnancy, and that it may be higher than population estimates suggest (Edey, Moran et al.2014). Previous Confidential Enquiries have suggested that significant improvements in care are necessary to reduce mortality.

In 2016–2018, 22 women with epilepsy died during pregnancy or up to one year after pregnancy compared with 13 women with epilepsy in 2013-15. The details of the care of these women were reviewed. In all of them, improvements in care were identified. Sudden Unexplained Death in Epilepsy (SUDEP) in pregnancy had doubled. In many instances, these deaths were linked to inadequate medications management for these women before or during their pregnancy.

3.0 Pregnancy and Epilepsy

3.1 Effects of pregnancy on epilepsy

Seizure frequency increases during pregnancy in between a quarter and a third of women due to a number of factors including changes in pharmacokinetics of Anti-seizure medication (ASMs) (Tomson et al, 1997). Poor adherence to treatment because of concerns about adverse effects on the foetus plays a part (Fairgrieve et al 2000).

Pregnancy is associated with pharmacokinetic changes including an increase in volume of distribution, an increase in drug metabolism through hepatic microsomal enzyme induction, a reduction in serum albumin concentration and an increase in renal clearance (Yerby et al 1992). There is a tendency for plasma levels of ASMs to fall in pregnancy but there is no evidence to support routine increase of ASM doses (Richmond et al 2004).

3.2 Risks to the fetus from maternal epilepsy

Tonic clonic seizures increase the pressure in the pregnant uterus and lead to transient changes in CTG and may also lead to trauma if the woman falls (Vlinkainen et al 2006). Tonic clonic seizures can rarely result in lactic acidosis which is transferred to the foetus resulting in hypoxia. Reassuringly, recent reports suggest that the number of stillbirths in adequately treated women with epilepsy is similar to the background population (Tomson et al 2004).

Women should be made aware of the risks of uncontrolled seizures both to themselves and to the foetus and therefore the importance of compliance with medication.

3.2.1 Risks to the foetus from anti-seizure medications (ASMs)

Major and minor malformations occur more commonly in infants exposed to AEDs during pregnancy Fairgreave et al 2000; Katzo et al 2006; Artma et al 2005). The overall risk of major foetal malformations increases two to three fold in women taking ASMs. Polytherapy, particularly with certain combination of drugs, carries a much higher risk.

The most common major malformations associated with ASMs is neural tube defects, orofacial clefts, congenital heart anomalies. The incidence of epicanthic folds and digital hypoplasia is also increased with ASM therapy. "Foetal Anticonvulsant syndrome" comprising typical dysmorphic craniofacial appearances and a variety of musculoskeletal abnormalities have been described in association with ASM treatment in pregnancy (Holmes et al, 2001; Kaneko et al, 1999). Although individual drugs have been associated with specific patterns, there is overlap between them and genetic factors may influence susceptibility (Morrow et al 2006).

Whether ASMs taken during pregnancy can affect the child's intellectual development is uncertain (Clayton and Donnai, 1995; Moore et al 2000). However, more concern about the effects of valproate on infant development has recently been raised in the 'Valproate pregnancy prevention programme' where studies have found 30-40% of children exposed to Sodium Valproate will have developmental problems.ie being late in learning to walk and talk, lower IQ, poor speech and language skills, memory problems, autism and ADHD.

At present there is insufficient evidence on which to base advice about risks of most of the newer ASMs.

Table 1. Risks of epilepsy medicines causing major congenital abnormalities: UK Epilepsy and Pregnancy Register findings between 1996 and 2012

MONOTHERAPY:

Epilepsy Medicine	Daily dose	Approximate risk	% Risk
Carbamazepine	any	2-3 in 100	2.6
Lamotrigine	any	2-3 in 100	2-3
Levetiracetam	any	2 in 100	2
Sodium Valproate	Below 1,000mg	6 in 100	6
Sodium Valproate	Above 1,000mg	10 in 100	10
Topiramate	any	4-5 in 100	4-5

POLYTHERAPY: (ie a combination of x2 anti-epileptic drugs)

Epilepsy medicine combination	Approximate risk	% Risk
Sodium Valproate with any other epilepsy	9 in 100	8.9
medicine		
Any combination without Sodium Valproate	4 in 100	4.2

Where possible, epilepsy treatment should be reviewed before becoming pregnant. The effects of ASMs and risks of seizures should be explained:

- If the woman's epilepsy is in remission, the risk of recurrent seizures is low and the woman is aware of the consequences of recurrent seizures.

 Consideration may be given to withdrawal of ASMs prior to conception.
- If possible the woman should conceive on the lowest effective dose of AEDs appropriate for her epilepsy syndrome. If she is already pregnant and has good seizure control there is no benefit in changing the dose.
- Any woman who has had a child with ASM related malformation should be reviewed by an epilepsy specialist before becoming pregnant again.
- Sodium Valproate should only be prescribed for women of child bearing years if no other epilepsy medicine suits in accordance with the MHRA guidelines and pregnancy prevent programme.

4.0 Valproate pregnancy prevention programme

New regulations have been introduced by the Medicines and healthcare products Regulatory Agency (MHRA) regarding how Sodium Valproate is prescribed to women and girls of child bearing age. The new measures are designed to ensure that all women who are prescribed this drug for their epilepsy are fully informed of the risks. These women are advised on the importance of using effective contraception and are invited for annual reviews of their treatment to specialist epilepsy services for completion of an annual risk acknowledgement form (MHRA 2018) http://www.epilepsyandpregnancy.co.uk

5.0 Risk of inheritance

Genetics of most epilepsies are complex with multiple genes involved and interaction of environmental factors. The risk of epilepsy in the offspring is higher with idiopathic than with symptomatic epilepsies.

6.0 Pre conception counselling

Epilepsy is common in child bearing age and exposure to anti-seizure medications (ASMs) occurs in approximately 1 in 150 pregnancies. It is important that the primary care giver i.e. GP, epilepsy nurse, neurologist be alert to the possibility of conception and discuss this with women. A preconception consultation for women with epilepsy led by the Health Board's Epilepsy Specialist Nurses is available held in both Morriston and Princess of Wales Hospitals.

In those not planning a pregnancy, or in those who are being investigated or seizure control is not satisfactory, effective contraception should be prescribed.

Subjects to discuss in pre pregnancy counselling of women with epilepsy include:

- Women with epilepsy should be reassured that most will have a normal pregnancy and delivery. The risk of congenital malformations is low if they are not exposed to ASMs in the peri-conception period.
- Genetic counselling regarding risk of inheriting epilepsy which is low in most types of epilepsy
- Risk of congenital anomalies associated with ASMs -Women should be informed that the risk of congenital abnormalities in the fetus is dependent on the type, number and dose of ASMs
- Drug treatment monotherapy is preferable at the lowest effective dosage. Good compliance with treatment is essential. Routine monitoring of ASM levels in pregnancy is not recommended. Although, there may be a role for this in individual cases.
- Women with epilepsy who are planning their pregnancy should have a clinician competent in the management of epilepsy take responsibility for sharing decisions around choice and dose of ASMs, based on the risk to the fetus and control of seizures.
- Folic acid 0.4 mg (400 micrograms) daily should be taken from 3 months before conception to at least the end of the first trimester to reduce the risk of neural tube defects and cognitive deficits. Ideally this should be continued throughout pregnancy as there is a small risk of folate-deficiency anaemia.
- Antenatal screening tests ultrasound can detect most neural tube defects
- Expected course of epilepsy and risk of seizures the frequency of seizures usually remains unchanged as prior to pregnancy. Drug doses may need to be increased in some women to maintain adequate seizure control
- Foetal and maternal risks associated with seizures tonic clonic seizures carry risks to the mother and foetus and should be avoided

- Expected course of pregnancy and delivery obstetric outcome is usually uneventful and caesarean section is needed only in the most difficult cases.
- Interactions between hormonal contraceptives and antiepileptic drugs efficacy of contraception(both oestrogen and progesterone's) is reduced if on enzyme inducing ASMs

Table 2. List of hepatic enzyme and non-hepatic enzyme inducing anti-epileptic drugs

AEDs which induce hepatic enzymes	AEDs that DO NOT induce hepatic enzymes	
Carbamazepine (Tegretol)	Acetazolamide (Diamox)	
Oxcarbazepine (Trileptal)	Benzodiazepines (Diazepam, Clobazam,	
Phenobarbital	Clonazepam Midazolam, Lorazepam)	
Phenytoin (Epanutin)	Ethosuximide (Zarontin)	
Primidone (Mysolin)	Gabapentin (Neurontin)	
Topiramate (Topamax)	Pregabalin (Lyrica)	
Zonisamide (Zonegran)	Lamotrigine (Lamictal)	
Eslicarbazepine acetate (Zebinix)	Levetiracetam (Keppra)	
Perampanel (Fycompa)	Tiagabine (Gabiltril)	
	Valproate*(Epilim)	
	Vigabatrin(Sabril)	
	Lacosomide (Vimpat)	
	Brivaracetam (Briviact)	

7.0 Antenatal care

Freedom from seizures is the ultimate goal in the treatment of patients with epilepsy. With proper management before conception, during pregnancy, and after the birth, the vast majority of pregnancies in women with active epilepsy will have a favourable outcome (NICE 2012). This is only possible with a multiprofessional approach between GPs, midwives, obstetricians, neurologists or specialist physicians.

Pregnant women who have experienced seizures in the year prior to conception require close monitoring for their epilepsy.

WWE should be informed that two-thirds will not have seizure deterioration in pregnancy. In women who were seizure free for at least 9 months to 1 year prior to pregnancy, 74–92% continued to be seizure free in pregnancy.

If admission is required during antenatal period, women with epilepsy at reasonable risk of seizures should be accommodated in an environment that allows for continuous observation by a carer, partner or nursing staff

7.1 Role of the midwife Antenatal Booking Visit

All pregnant women with epilepsy should be referred to the epilepsy services at the antenatal booking visit. The community midwives should refer woman to Joint Epilepsy ANC in Singleton Hospital. Referrals can be made by emailing SBU.EpilepsyinPregnancy@wales.nhs.uk

An appointment in this clinic should be made for 12 - 14 weeks gestation (after dating scan)

The community midwife will arrange the dating scan at around 12 weeks and the anomaly scan at around 20 weeks to check for foetal anomalies. Further scans will be decided as clinical need arises by the obstetrician.

At every point of contact with the patient, the opportunity should be taken to give information about the importance of continuing good adherence with AED and to ensure the woman is taking Folic acid (0.4mg). Information regarding women with epilepsy and having a baby can be downloaded from http://www.epilepsy.org.uk/info/women/

Advice should be provided in the antenatal period around medication and infant feeding, breastfeeding is usually safe and should be supported and encouraged where there are no contraindications. Information around drug contraindications can be found at https://www.breastfeedingnetwork.org.uk/drugs-factsheets/. Where there is uncertainty, the plan of care should be discussed with the infant feeding lead.

The community midwife will review women between hospital visits and liaise with the epilepsy specialist team and Obstetrician if any concerns are present.

7.2 UK Epilepsy and Pregnancy Register

All pregnant women with epilepsy, whether or not on medication, should be notified, with their consent, to the UK pregnancy register. This information is useful in assessing the safety of different drugs used to treat epilepsy. Women can self-register or a health professional can do this with the woman's consent by completing a hard copy or website from

(www.epilepsyandpregnancy.co.uk).

Tel 0800 389 1248.

7.3 Role of the obstetrician

The Obstetrician is responsible for the overall care of the woman and will see the women at regular intervals in the Joint Epilepsy Antenatal clinic for the obstetric care. Healthcare professionals should be alert to signs of depression, anxiety and any neuropsychiatric symptoms in mothers exposed to ASMs

Clinicians caring for mothers with epilepsy takin ASMs should be aware of the effects of the drugs, particularly those relating to cognitive and psychiatric problems.

Women should be advised that certain epilepsies as well as particular ASMs carry an increased risk of depression with features such as low mood, inability to plan and organise thoughts, poor concentration, tiredness, irritability or anger. Appropriate and early referral to the perinatal mental health team is required if there are any concerns.

A birth discussion and plan should be documented in the All-Wales Maternity Records before 36/40 to aid intrapartum care delivery.

Postnatal Contraceptive care planning discussions should be held before 36/40 and a plan of care clearly documented.

7.4 Role of Epilepsy Specialist Team- (Consultant Neurologist and Epilepsy Clinical Nurse Specialist (CNS))

The Epilepsy Specialist Nurse in the Joint clinic will have active involvement in the management of epilepsy, liaise with the Consultant Neurologist and will be responsible for implementing the Epilepsy management plan.

The Epilepsy CNS will offer to facilitate the registration of these women with the UK Epilepsy register.

Seizure frequency should be monitored carefully during the pregnancy and adjustments made to ASM doses to minimise the number of seizures (particularly generalised tonic clonic seizures).

Women with epilepsy taking ASMs who become unexpectedly pregnant should be able to discuss therapy with an epilepsy specialist on an urgent basis.

For emergency epilepsy referrals there is a 24/7 on call neurology service which can be accessed via switch board. Also, a Liaison neurology consultant, Monday-Friday 9am-5pm.

The frequency of antenatal clinic visits will depend on clinical needs.

8.0 Intra-partum Care

Most women with epilepsy will have a normal labour and vaginal delivery, but stress, pain, sleep deprivation, hyperventilation and dehydration increase the risk of seizure in labour (1-4%). (Tomson et al 2004).

Women with epilepsy are recommended to labour and birth on the obstetric unit (OU) NICE 2022. Routine intrapartum care provision should be provided in line with NICE, 2022, unless additional care planning has been advised and

documented by the obstetric team, this should include recommendation around method of intrapartum fetal monitoring.

Continuous fetal monitoring is recommended in women at high risk of a seizure in labour, and following an intrapartum seizure (RCOG, 2016).

Use of water immersion is not usually recommended in women with epilepsy due to the delay in care where evacuation occurs, and the manual handling risk in evacuation in this instance. The decision to use water for analgesia and birth should be made on an individual basis. Women with epilepsy who are not taking ASMs and who have been seizure free for a significant period may be offered a water birth after discussion with their epilepsy specialist.

After individual assessment, in certain circumstances, the obstetric team may consider birth under midwifery led care to be safe and appropriate, however individual birth planning is required in line with the All Wales Midwifery Led Care Guideline (Section 13 https://wisdom.nhs.wales/all-wales-guidelines/all-wales-guidelines/all-wales-midwifery-led-care-guideline-2022/). In these instances, a comprehensive birth plan should be completed by the obstetric team/senior midwife and will be accessible to midwives providing intrapartum care, this will include information around the different models of care and transfer times. Care provision in midwifery led settings will only be provided with the All-Wales Midwifery Led Care Guideline. Women with epilepsy do not meet the criteria for the Clinical Pathway for Normal Labour (WMNN,2021) and all care should be recorded on using the partogram and traditional continuation sheets. It is important that both the Obstetric and Anaesthetic registrars are informed of the admission and the woman has taken her routine medication.

Factors predisposing to increased seizure should be minimised i.e. ensuring good support to reduce anxiety, adequate hydration and good analgesia. The usual ASM doses should be taken when in labour and continued in the postnatal period. In women unable to tolerate oral medication, ASMs can be given by other routes. Guidance can be downloaded from the e-BNF which can be accessed via the health board's intranet; http://bnf.nice.org.uk

Epilepsy in itself is not an indication for Caesarean section. Caesarean is only performed for Obstetric reasons except if the woman has been having frequent tonic clonic or prolonged complex seizures towards the end of pregnancy.

Analgesia in labour: All of the available methods of labour analgesia can be used with women with epilepsy safely. There is no increased risk of seizures with administration of Pethidine in the doses used for labour. Use of tramadol for pain relief is contra-indicated in women with epilepsy as it lowers the seizure threshold.

8.1 Seizures in labour

The epilepsy society website quotes up to 2% of women (2-4% in every 100) with epilepsy may have a tonic clonic seizure during labour due to stress or

during the 24 hours afterwards. Seizures in labour should be terminated as soon as possible to avoid maternal and fetal hypoxia and fetal acidosis. Benzodiazepines are the drugs of choice.

Status epilepticus in labour is very rare but is associated with significant increase in maternal as well as foetal mortality and is a medical emergency.

The aim is to terminate seizure as soon as possible using IV Lorazepam or diazepam. Please see appendix 2 for guidance on treatment of seizure in hospital.

Status epilepticus is characterised by prolonged and persistent seizures, (please see appendix 3 for guidance on treatment on Status Epilepticus).

If there is confusion whether epileptic fit or eclampsia-, also give slow IV Magnesium 4 g over 5-10 minutes followed by the infusion for 24 hours (see appendix 2, page 16 - Scottish Intercollegiate Guidelines Network 2003). Delivery should be expedited after a seizure in labour according to clinical situation e.g. Artificial rupture of the membranes, syntocinon augmentation, vaginal operative delivery if in second stage of labour. Caesarean section is usually reserved for obstetric indications, or if the woman has recurrent seizures or has status epilepticus.

9.0 Postnatal care

Following delivery, the drug levels may change again leading to toxicity and the dosage needs to be adjusted accordingly. Seizures may be provoked due to fatigue and lack of sleep.

9.1 Care of mother

Although the overall chance of seizures during and immediately after delivery is low, it is relatively higher than during pregnancy. Women should be advised to continue their ASMs in the postnatal period. Mothers should be well supported in the postnatal period to ensure that triggers of seizure deterioration such as sleep deprivation, stress and pain are minimised. Use of tramadol for pain relief is contra-indicated in women with epilepsy as it lowers the seizure threshold.

9.2 Safety with care of the baby

Parents of new babies should be informed that introducing a few simple safety precautions may significantly reduce the risk of accidents and minimise anxiety. Useful information packs offered by Epilepsy CNS which includes the following: Epilepsy and having a baby booklet, pregnancy diaries, after the birth, giving birth all published by Epilepsy Action 2018 also included in this pack: seizure diary, UK epilepsy and pregnancy register information and epilepsy advice line contact details.

9.3 Breastfeeding

Breastfeeding is safe and encouraged. Blood levels of ASM in infants are probably lower than in utero provided infant is born healthy and at term (Kuczkowski, 2006). If on phenobarbitone, the infant may become sedated.

9.4 Contraception

As much as possible the pregnancies should be planned and appropriate contraception is important. Enzyme inducing drugs increase the metabolism and clearance of both oestrogens and progesterone's, therefore making them less effective leading to more break through bleeding and failures.

ASMs which induce hepatic enzymes	ASMs that DO NOT induce hepatic enzymes		
	-		
Carbamazepine (Tegretol)	Acetazolamide (Diamox)		
Oxcarbazepine (Trileptal)	Benzodiazepines (Diazepam, Clobazam,		
Phenobarbital	Clonazepam Midazolam, Lorazepam)		
Phenytoin (Epanutin)	Ethosuximide (Zarontin)		
Primidone (Mysolin)	Gabapentin (Neurontin)		
Topiramate (Topamax)	Pregabalin (Lyrica)		
Zonisamide (Zonegran)	Lamotrigine (Lamictal)		
Eslicarbazepine acetate	Levetiracetam (Keppra)		
(Zebinix)	Tiagabine (Gabiltril)		
Perampanel (Fycompa)	Valproate*(Epilim)		
	Vigabatrin(Sabril)		
	Lacosomide (Vimpat)		
	Brivaracetam (Briviact)		

In women on enzyme inducing ASMs, higher dose of oestrogens and progesterones are necessary, so Oral Contraceptive Pills should contain a minimum of 50mcg and increased to 80 or 100 mcg of Estradiol if necessary. Tricycling the pills in order to reduce number of pill free intervals, is useful. Progesterone only pill or implanon are not recommended. The depot injection is effective but the interval should be shortened to 10 weeks from 12 weeks. Emergency contraception (Levonelle) dose should be increased (doubled) to be effective.

9.5 Post-natal review

All women should be reviewed by the Epilepsy Team following birth. This should be arranged for 6-8 weeks post birth.

10.0 Written information for women

The Welsh Risk Pool Standard15: Maternity Services (2005) require women with epilepsy to be given written information during pregnancy relevant to safety measures.

Information leaflets for women provided by Epilepsy Action "Epilepsy and having a baby" contains important information relating to:

- Planning a baby
- o Epilepsy medicines and birth problems
- Getting pregnant
- Source of support

http://www.epilepsy.org.uk/info/women/

NHS Choices provide a web site containing information on epilepsy in pregnancy "The pregnancy care planner" (http://www.nhs.uk)

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Appendix 1

Swansea Bay University Health Board Pathway of care for women with epilepsy in pregnancy			
Midwifery Team	Obstetric Team	Epilepsy Specialist Team	
First trimester			
Antenatal booking visit Give Epilepsy Action link re: epilepsy and pregnancy information Folic Acid 0.4 mgs daily, adherence with treatment Arrange dating and anomaly scan Arrange early appointment in Medical ANC Email referral to Epilepsy Specialist Team: SBU EpilepsyinPregnancy@wales.nhs.uk	Review and document obstetric care plan Check electronic referral form (appendix 3) has been sent to epilepsy services	 Safety precautions for both mum and her baby Life style choices Medication and seizure review With written information on epilepsy and pregnancy information given (Ante-Natal epilepsy information packs) Blood monitored where needed To facilitate to register pregnancy onto the UK Epilepsy register 	
Second trimester			
16 week visit Reiterate advice-medication, personal safety etc. To continue with Folic Acid 0.4mgs daily, adherence with treatment	Review of results, Amend care plan Monitor growth and	Advice on: • Safety precautions for both mum and her baby	

Third trimester	development of foetus	 Life style choices Medication and seizure review Blood monitored where needed
Routine antenatal examinations Discuss labour, labour analgesia, infant care, breastfeeding etc. Arrange parent craft sessions To continue with Folic Acid 0.4mgs daily, adherence with treatment	Finalise plan for mode of delivery Discuss queries about labour etc. Monitor growth and development of foetus	Advice on: Safety precautions for both mum and her baby Life style choices Medication and seizure review Blood monitored where needed
Intra-partum care		
Ensure taken ASM Good hydration, analgesia, psychological support Avoid hyperventilation Inform on call doctors (Obstetrics, anaesthetics, neonatologists)	Early review by Obstetric and Anaesthetic registrar	
Postnatal care		
Review of labour events Encourage breast feeding Teach infant care and reiterate personal and infant safety. Ensure compliant with medication Strategies to cope with stress and good sleep hygiene To continue with Folic Acid 0.4 mgs daily, adherence with treatment	Review of labour events Examination to assess suitability for discharge Discuss and prescribe contraception Need for good seizure control and Folic Acid 0.4 mg before embarking on	 Epilepsy frequency and medication review ASM alteration if necessary Breastfeeding and contraception reviewed Childcare and Personal safety review

next pregnancy	 Additional leaflets on above if required Check completion of Epilepsy and
	pregnancy register

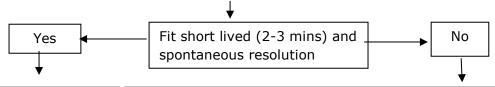
Appendix 2

Flow Chart for the management of Epileptic seizure in labour

(NB. In women with no prior history of epilepsy, eclampsia is the most common cause of seizure in labour)



- Stay calm, make note of time.
- Ensure woman is safe from injury (move hard objects away)
- Do not restrain the woman or put anything in the mouth
- Allow the seizure to happen (likely to last as long as it usually does- ask family)
- Alert senior midwife, on call Anaesthetic and Obstetric registrar Once the convulsing stops
- Turn to left side (recovery position) and maintain clear airway (wipe away spit/froth, ensure no block to airway)
- Facial oxygen at 15 L/min, check blood sugar levels
- If have wet themselves deal with this as privately as possible



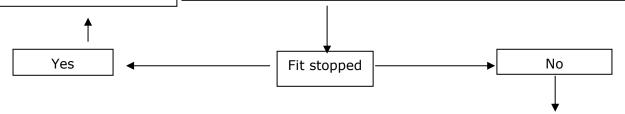
Exclude eclampsia:

Check BP / urine for proteinuria
If in doubt commence MgSO4
PET bloods etc

Observe mother

- Give IV Lorazepam up to 4 mg **or** 10-20 mg rectal Diazepam if no IV access or Midazolam 10mg buccal (can be repeated in 10 minutes if necessary)
- If any possibility of eclampsia- give IV Magnesium sulphate 4 grams over 5-10 minutes followed by 1 gram/hour for 24 hours

Observe mother



Get senior Medical help

Protect airway, give oxygen

Commence IV Levetiracetam 60mg/kg IV infusion (max 4500mg) diluted in 100 mg of normal saline

OR IV Phenytoin 18 mg/kg slowly (rate not exceeding 50mg per minute)

Continuous ECG, arterial blood gases

Expedite delivery

Consider transfer to ITU for ventilation

Appendix 3

Email referrals to: SBU. Epilepsyin Pregnancy @wales.nhs.uk

MIDWIFE REFER	RAL FO	R EPILEPSY S	ERVIC	ES
PATIENT IDENTIFICATION LABEL NAME:		INDICATE IF URGENT OR ROUTINE REFERRAL by answering yes/no to questions		
TV/ WVIE.		URGENT REFERRAL	YES	NO
POST CODE:	1	aking Sodium Valproate		
		(Epilim)		
NHS NUMBER:		Gestation > 12 weeks		
		Poor seizure control		
DATE OF BIRTH:	Si	de effects of anti-epileptic drugs		
		ROUTINE REFERRAL		
NAMED MIDWIFE		CONTACT N	UMBER	
NAMED OBSTETRICIAN:	_			
EDD:		GESTATION AT RE	FERRAL:	
DESCRIPTION OF SEIZURES:				
ANTI CONVULSANT MEDICATION BEING TAKEN AT TIME OF REFERRAL:				
FOLIC ACID 0.4 mg BEING TAKEN AT TIME OF REFERRAL (circle)		YES	NO	
IF NOT TAKING FOLIC ACID 5MG ADVISED TO COMMENCE IMMEDIATELY YES		5		
AND TO CONTINUE THROUGHOUT PREGNANCY AND CHILD BEARING YEARS.				
NAME OF REFERRING MIDWIFE:				
DATE OF REFERRAL:				

Maternity Services

Checklist for Clinical Guidelines being submitted for Approval

Title of Guideline:	Epilepsy In Pregnancy, Labour and Postnatal period - Management
Name(s) of Author:	M Dey, J. Edwards, S. Brown, S. Williams, R. Powell
Chair of Group or Committee approving submission:	Antenatal Forum / LW Forum
Brief outline giving reasons for document being submitted for ratification	Updated policy
Details of persons included in consultation process:	Antenatal Forum & LW Forum
Name of Pharmacist (mandatory if drugs involved):	n/a
Issue / Version No:	V3
Please list any policies/guidelines this document will supercede:	Protocol for the Management of Women with Epilepsy in Pregnancy issued March 2019
Date approved by Group:	24 th May 2023
Next Review / Guideline Expiry:	24 th May 2026
Please indicate key words you wish to be linked to document	Epilepsy, Seizure, Fit
File Name: Used to locate where file is stores on hard drive	Zdrive/maternity/guidelines