The management of emergency rescue medication (buccal/oro-mucosal midazolam) for children, young people and adults with prolonged or repeated generalised, convulsive (tonic–clonic, tonic or clonic) seizures in the community

JAPC has classified unlicensed buccal midazolam preparations and Epistatus as BLACK-existing patients should be reviewed by specialist and switched to a recommended Buccolam preparation. Do not stop abruptly without patient receiving training for Buccolam.

Introduction
With the emphasis on community care increasingly lay carers are being asked to respond to prolonged convulsive seizures that have the potential to develop into status epilepticus.

Most epileptic seizures stop of their own accord and do not need medical attention. Status epilepticus is a condition characterised by seizure or a series of seizures that last for 30 minutes or more, without the person regaining consciousness. If a seizure continues for more than 5 minutes, it may not stop and could potentially develop into status epilepticus unless rapid treatment is given. Status epilepticus can occur in any type of seizure. When status epilepticus occurs in convulsive seizures it is a medical emergency and needs urgent treatment. Buccal midazolam should be considered for immediate emergency care and treatment in children, young people and adults who have prolonged (lasting 5 minutes or more) or repeated (three or more in an hour) convulsive seizures in the community.

Buccal Midazolam
- It is recognised that the administration of Buccal Midazolam for the control of prolonged or continuous seizures is an effective treatment which can be lifesaving. Given promptly this relatively simple procedure can prevent major disruption to daily life resulting from hospital emergency treatment and therefore is being increasingly used as an emergency treatment for prolonged convulsive seizures.

- Midazolam is a water-soluble, short-acting, benzodiazepine and can be easily administered into the buccal cavity (between the lower gums and cheeks). It is available as an oro-mucosal solution in prefilled syringes.

### Buccolam® (licensed in children 3months-18years)

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<th>Formulary status</th>
<th>GREEN after specialist initiation for children under 18 years and adults</th>
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<tbody>
<tr>
<td>Ingredient</td>
<td>midazolam hydrochloride</td>
</tr>
<tr>
<td>Form</td>
<td>5mg/mL</td>
</tr>
<tr>
<td>Strength</td>
<td>pre-filled oral syringes of 2.5mg, 5mg, 7.5mg, 10mg</td>
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</table>
| Dose(buccal administration) | **Neonates to 3mths**: 300microgram/kg (max. 2.5mg) unlicensed  
3mths-1yr: 2.5mg (depending on the weight of the child smaller doses may be needed at 300microgram/kg, max.2.5mg - to measure it accurately use unlicensed Epistatus solution )  
1-5yrs: 5mg  
5-10yrs: 7.5mg  
10-18yrs: 10mg  
Adult over 18yrs: 10mg (unlicensed)** |
• Buccolam® is a licensed product for the treatment of prolonged acute seizures in children and young people up to the age of eighteen, its use in adults is as yet unlicensed.

• The MHRA has stipulated that licensed products should be used wherever possible, even if it means using a product off-label and outside its licensed indications.

• Doses for children and young people should be advised by the Children’s Specialist Epilepsy services. Adults should normally be prescribed 10mg.

Prescribing and monitoring: children and young adults
• All children and young adults must be seen by Children’s Epilepsy Specialist services for all seizure management and before rescue medication is prescribed.

• Buccal midazolam should only be considered for use in the community for children who have had a previous episode of prolonged (over 5 minutes) or serial convulsive seizures.

• Buccal midazolam should be used as first-line treatment in children with prolonged or repeated seizures in the community. Only prescribe rectal diazepam if preferred or if buccal midazolam is not available.

• Consider discontinuation if no history of prolonged or repeated generalised, convulsive (tonic–clonic, tonic or clonic) within the last two years.

• Following an emergency acute admission ensure a referral has been made by the Emergency Department to Specialist Children’s Epilepsy services for an appropriate review.

Prescribing and monitoring: adults
• Consider referring to neurology services when buccal midazolam is being considered for use in the community for prolonged or serial convulsive seizures.

• Buccal midazolam should only be considered for use in the community for adults who have had a previous episode of prolonged (over 5 minutes) or serial convulsive seizures.

• Administer buccal midazolam as first-line treatment in adults with prolonged or repeated seizures in the community. Only prescribe rectal diazepam if preferred or if buccal midazolam is not available.

• If currently prescribed rectal diazepam consider referral to neurology services for advice regarding switching to buccal midazolam.

• Consider discontinuation if no history of prolonged or repeated generalised, convulsive (tonic–clonic, tonic or clonic) within the last two years.

• Following an emergency acute admission ensure a referral has been made by the Emergency Department to Neurology Services for an appropriate review.

Individual epilepsy management plan/emergency epilepsy plan
• All prescriptions of rescue medication should be supported with an individual plan (for example see Appendix 1).

• It is the prescriber’s responsibility to ensure a management plan is completed and reviewed in conjunction with the individual’s annual epilepsy review.
Individual care plans should include the following information:
- Name of child/adult
- Warnings/triggers
- Seizure classification and description
- Usual duration of a seizure
- Emergency medication treatment plan (prescribed medication, when to give it, initial dose, and usual reaction)
- Difficulties in administration
- If a second dose be given
- When to call 999 for an emergency
- Who should witness administration of emergency medication, if applicable
- Who/where needs to be informed
- Recovery and interventions
- Prescriber's or health professionals signature.

If the buccal midazolam is initiated by Primary Care services the individual’s management plan should state that emergency services should be called on administration of the initial dose of buccal midazolam, regardless of efficacy.

Administration of buccal midazolam should be administered by trained clinical personnel or, if specified by an individually agreed protocol drawn up with the specialist, by family members or carers with appropriate training. The prescriber should ensure family members or carers are trained or have access to appropriate training which should include epilepsy awareness, administration of buccal midazolam and health and safety issues.

Key Contacts

Specialist Children's Epilepsy Services: Rachael Wheway, Epilepsy Specialist Nurse - 01332 785103
Neurology Department: Alison Holmes, Specialist Epilepsy Nurse - 01332 787824
Learning Disability Services: Gaynor Ward, Consultant Nurse - 01332 268455
Ronnie McKeith Centre - 01332 785609
Pharmacy (Kingsway): 01332 623700 ext. 33268/33214
Pharmacy (CRH): 01246 513153

Consultee
Derbyshire Medicines Management Guidelines and Shared Care Group

References


NICE guidelines (Epilepsies: diagnosis and management, 2012. CG137. Section 1.14.1)

NICE (Feb 2012) Treating prolonged or repeated seizures and convulsions http://pathways.nice.org.uk/pathways/epilepsy
Appendix 1: Example epilepsy management plan/emergency epilepsy plan (JEC, 2012)

### Buccaneers midazolam care plan

Guidelines for administration of buccal midazolam in epilepsy and febrile convulsions for non-medical/non-nursing staff individual care plan to be completed by or in consultation with the prescribing health practitioner (please use language appropriate to the lay person).

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<td>DATE OF BIRTH</td>
<td>PRESCRIBING WEIGHT</td>
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**SEIZURE CLASSIFICATION AND/OR DESCRIPTION OF SEIZURES WHICH MAY REQUIRE BUCCAL MIDAZOLAM**

(Record all details of seizures e.g. goes stiff, falls, convulses down both sides of body, convulsions last 3 minutes etc. Include information re. triggers, recovery time etc.)

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### MIDAZOLAM TREATMENT PLAN

1. **WHEN SHOULD BUCAL MIDAZOLAM BE ADMINISTERED?** (Note here should include whether it is after a certain length of time or number of seizures)

2. **BRAND AND PRODUCER OF BUCAL MIDAZOLAM PRESCRIBED**

3. **INITIAL DOSAGE: HOW MUCH BUCAL MIDAZOLAM IS GIVEN INITIALLY?**  
   (Note recommended number of milligrams for this person)

4. **WHAT IS THE USUAL REACTION(S) TO BUCAL MIDAZOLAM?**

5. **IF THERE ARE DIFFICULTIES IN THE ADMINISTRATION OF BUCAL MIDAZOLAM (E.G. EXCESSIVE SALIVATION), WHAT ACTION SHOULD BE TAKEN?**

6. **CAN A SECOND DOSE OF BUCAL MIDAZOLAM BE GIVEN? YES/NO**  
   (There is an increased risk of respiratory depression when more than 2 doses of benzodiazepine are given. It is therefore recommended that one dose is given and that an ambulance is called if the initial dose is not effective, as more benzodiazepine may be required in hospital, and that community staff receive training in respiratory rescue).

7. **WHEN SHOULD 999 BE DIALLED FOR EMERGENCY HELP?**  
   (Please tick appropriate box).

   IF THE FULL PRESCRIBED DOSE OF MIDA佐ALAM FAILS TO CONTROL THE SEIZURE

   AFTER ........ MINUTES (please record as appropriate) □

   OTHER (please give details) □

8. **WHO SHOULD WITNESS THE ADMINISTRATION OF BUCAL MIDAZOLAM?**

9. **WHO/WHERE NEEDS TO BE INFORMED?**

   **PRESCRIBING DOCTOR** .......................................... Tel: .............................................

   **PARENT/GUARDIAN** .......................................... Tel: .............................................

   **OTHER** .......................................................... Tel: .............................................

10. **FOR CARE/MEDICAL STAFF: IS INSURANCE COVER IN PLACE? YES/NO**
11. PRECAUTIONS - UNDER WHAT CIRCUMSTANCES SHOULD BUCCAL MIDAZOLAM NOT BE USED (e.g. other medication already administered within the last ........ minutes).

12. MAXIMUM DOSE OF MIDAZOLAM TO BE ADMINISTERED IN A 24 HOUR PERIOD

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<th>ALL OCCASIONS WHEN BUCCAL MIDAZOLAM IS ADMINISTERED MUST BE RECORDED</th>
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<td>Signature:</td>
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<td>Date:</td>
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<tr>
<td>AUTHORISED PERSON(S) TRAINED TO ADMINISTER BUCCAL MIDAZOLAM:</td>
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<td>NAME (BLOCK CAPITALS)</td>
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<td>EMPLOYER OF THE PERSON(S) AUTHORISED TO ADMINISTER BUCCAL MIDA</td>
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This form should be available for examination at every medical review of the patient

COPIES TO BE HELD BY: ..................................................................................................................

DATE FOR REVIEW OF PLAN: ..........................................................................................................

COPY HOLDERS TO BE NOTIFIED OF ANY CHANGES BY: ..............................................................

Local sources of information and support are available from the JEC Chief Executive
Sharon Wood – PO Box 186, LEEDS, LS20 9WY ● Telephone 01943 871852