

4. Central Nervous System

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Key

	Red drug (hospital only) see GMMMG RAG list
	Amber drug (shared care) see GMMMG RAG list
	Green drug (drugs that may be initiated in primary care, only used with drugs where there has been some debate as to whether they should be initially prescribed by GPs) see GMMMG RAG list
	If a medicine is unlicensed this should be highlighted in the template as follows Drug name U
	Not Recommended
	Over the Counter
Order of Drug Choice	Where there is no preferred 1 st line agent provided, the drug choice appears in alphabetical order
	Drugs that are not routinely prescribed are not included in the formulary however if a specialist recommends a drug and it is listed as:  following specialist advice' within the RAG list then the patient can be prescribed that treatment.

BNF chapter	4	Central Nervous System
Section	4.1	Hypnotics and Anxiolytics
Subsection	4.1.1	Hypnotics
	NICE TA77: Insomnia - newer hypnotic drugs NTS recommendation: Melatonin for primary insomnia in adults >55 NTS recommendation: Sodium oxybate for the treatment of cataplexy in adults with narcolepsy	
First choice	Zopiclone tablets: 3.75mg, 7.5mg	For short term use, licensed for max of 28 days.
Alternatives	Zolpidem tablets: 5mg, 10mg	For short term use, licensed for max of 28 days.
	Temazepam tablets: 10mg oral solution 10mg/5ml	MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015
Subsection	4.1.2	Anxiolytics
	Benzodiazepines are indicated for short-term relief of severe or disabling anxiety only	
	NICE CG113: Generalised anxiety disorder and panic disorder in adults	
First choice	Diazepam tablets: 2mg, 5mg, 10mg oral solution: 2mg/5ml	MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015




BNF chapter	4 Central Nervous System
Section	4.2 Drugs used in psychoses and related disorders
	NICE CG178: Psychosis and schizophrenia in adults NICE CG185: Bipolar disorder NTS recommendation: lurasidone for the treatment of schizophrenia GM Shared Care Guideline: Oral second generation (atypical) antipsychotics for adults
Subsection	4.2.1 Antipsychotic drugs
First choice	<p>Aripiprazole tablets: 5mg, 10mg, 15mg</p> <p>A for licensed indications and also unlicensed when recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements NICE TA213: Aripiprazole for the treatment of schizophrenia in people aged 15-17</p>
	<p>Haloperidol tablets: 500microgram, 1.5mg, 5mg, 10mg, 20mg oral solution: 5mg/5ml, 10mg/5ml</p>
	<p>Olanzapine tablets: 2.5mg, 5mg, 7.5mg, 10mg, 15mg, 20mg orodispersible tablets: 5mg, 10mg, 15mg, 20mg</p> <p>A for licensed indications and also unlicensed when recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements</p>
	<p>Quetiapine tablets: 25mg, 100mg, 150mg, 200mg, 300mg</p> <p>A for licensed indications and also unlicensed when recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements</p>
	<p>Risperidone tablets: 500microgram, 1mg, 2mg, 3mg, 4mg, 6mg orodispersible tablets: 500microgram, 1mg, 2mg, 3mg, 4mg oral solution: 1mg/1ml</p> <p>A for licensed indications and also unlicensed when recommended by NICE R Use in dementia (For new patients only). Check local commissioning arrangements MHRA (2013): Risperidone and paliperidone: risk of floppy iris</p>

		<u>syndrome</u>
Alternatives	Amisulpride tablets: 50mg, 100mg, 200mg, 400mg oral solution: 100mg/ml	A for licensed indications and also unlicensed when recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements
	Aripiprazole tablets: 30mg orodispersible tablets: 10mg, 15mg	A for licensed indications and also unlicensed when recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements NICE TA213: Aripiprazole for the treatment of schizophrenia in people aged 15-17
	Chlorpromazine tablets: 25mg, 50mg, 100mg	
	Clozapine tablets: 25mg, 50mg, 100mg, 200mg	R MHRA DSU: Clozapine: reminder of potentially fatal risk of intestinal obstruction, faecal impaction, and paralytic ileus, Oct 2017
	Levomepromazine tablets: 25mg (do not prescribe 6mg tablets)	Gn for palliative care use only Specialist initiation only
	Quetiapine MR tablets: 50mg, 150mg, 200mg, 300mg, 400mg	MR formulation is restricted for use as adjunct in depression only A Licensed indications and also unlicensed indications as recommended by NICE R Use in dementia U (For new patients only). Check local commissioning arrangements
Subsection	4.2.2 Antipsychotic depot injections A Only for those patients who are stable and if SCP available; or if under the care of a community psychiatric nurse. In some localities there may be commissioning arrangements in place to permit step down.	
First choice	Flupentixol decanoate injection: 20mg/1ml concentrated injection 100mg/1ml	A See above

	low volume injection 200mg /1ml	
	<p>Fluphenazine decanoate</p> <p>injection: 25mg/ml: 0.5 ml, 1 ml, 2 ml ampoules</p> <p>100mg/ml: 0.5 ml & 1 ml ampoules</p>	<p>A See above</p> <p>Manufacture of this product will cease from mid-2018; and it is expected that it will no longer be available in the UK from end of 2018.</p>
	<p>Zuclopenthixol decanoate</p> <p>injection: 200mg/1ml, 500mg/1ml</p>	<p>A See above</p> <p>MHRA DSU: Drug name confusion, April 2013</p>
Alternatives	<p>Risperidone</p> <p>injection vial(Risperdal consta®):</p> <p>25mg, 37.5mg, 50mg (powder for reconstitution)</p>	<p>A See above</p> <p>MHRA DSU: Drug name confusion, April 2013</p> <p>MHRA DSU: Risperidone and paliperidone: risk of floppy iris syndrome, Nov 2013</p>
	<p>Haloperidol decanoate</p> <p>injection: 50mg/1ml, 100mg/1ml</p>	<p>A See above</p>
	<p>Aripiprazole</p> <p>prolonged release injection (Abilify Maintena®)</p> <p>400mg vial (with solvent)</p>	<p>A See above</p> <p>NTS recommendation: Aripiprazole prolonged release injection (Abilify Maintena) for the treatment of schizophrenia</p>
	<p>Paliperidone palmitate</p> <p>Prolonged-release suspension for injection 50mg, 100mg, 150mg (1 month depot)</p> <p>Prolonged-release suspension for injection 175mg, 263mg, 350mg, 525mg (3 month depot)</p>	<p>A see above</p> <p>NTS recommendation: Paliperidone depot injection for schizophrenia</p>
Subsection	4.2.3 Drugs for mania and hypomania	
	Anti-manic drugs should be initiated by specialist mental health services	
	NTS recommendation: Asenapine for manic episodes in adult patients with BPD	
First choice		
Lithium		
	Preparations vary widely in bioavailability therefore prescribe by brand	

	<p>Lithium carbonate MR tablets: 200mg, 400mg (Priadel®)</p> <p>Lithium citrate oral solution: 520mg/5ml (Priadel®)</p>	<p>A</p> <p>NPSA (2009) Safer lithium prescribing</p>
Alternatives		
Benzodiazepines		
May be helpful in initial stages of treatment for behavioural disturbances or agitation		See 4.1.2
Antipsychotic drugs		
Antipsychotic drugs are useful in acute episodes of mania and hypomania.		See 4.2.1
First choice	<p>Olanzapine tablets: 2.5mg, 5mg, 7.5mg, 10mg, 15mg, 20mg orodispersible tablets: 5mg, 10mg, 15mg, 20mg</p>	A Licensed indications and also unlicensed indications as recommended by NICE
	<p>Quetiapine tablets: 50mg, 150mg, 200mg, 300mg, 400mg</p>	A Licensed indications and also unlicensed indications as recommended by NICE
	<p>Risperidone tablets: 500microgram, 1mg, 2mg, 3mg, 4mg, 6mg orodispersible tablets: 500microgram, 1mg, 2mg, 3mg, 4mg oral solution: 1mg/1ml</p>	A Licensed indications and also unlicensed indications as recommended by NICE
Alternatives	<p>Aripiprazole tablets: 5mg, 10mg, 15mg, 30mg orodispersible tablets: 10mg, 15mg oral solution 1mg/1ml</p>	<p>A Licensed indications and also unlicensed indications as recommended by NICE</p> <p>NICE TA292: Aripiprazole for treating moderate to severe manic episodes in adolescents with bipolar disorder</p>
	<p>Haloperidol tablets: 500microgram, 1.5mg, 5mg, 10mg, 20mg oral solution: 5mg/5ml, 10mg/ 5ml</p>	
	<p>Quetiapine modified release tablets:</p>	A Licensed indications and also unlicensed indications as

	50mg, 200mg, 300mg, 400mg	recommended by NICE
Carbamazepine		
May be used under specialist supervision for the prophylaxis of bipolar disorder in patients unresponsive to a combination of other prophylactic drugs		G_n Following specialist initiation See 4.8.1
Valproate		
Sodium valproate is used for the treatment of manic episodes associated with bipolar disorder.		
	Sodium Valproate (Episenta®) capsules 150mg, 300mg	G_n Following specialist initiation See 4.8.1

BNF Chapter	4 Central Nervous System	
Section	4.3 Antidepressant drugs	
	NICE CG90: Depression in Adults NICE CG91: Depression in adults with a chronic physical health problem NICE CG192: Antenatal and postnatal mental health NICE CG26: Post traumatic stress disorder NICE CG113 Generalised anxiety disorder and panic disorder in adults	
	MHRA DSU: Antidepressants: risk of fractures, May 2010	
Subsection	4.3.1. Tricyclic and related antidepressants	
	Tricyclic antidepressants (TCAs) are not usually recommended as a first-line treatment for depression because they are associated with a greater risk of side effects than SSRIs or SNRIs and are generally more toxic in overdose	
	Tricyclic antidepressants	
	Lofepamine tablets: 70mg	
Alternatives	Clomipramine capsules: 10mg, 25mg, 50mg tablets M/R: 75mg	
	Tricyclic-related antidepressants	
	Trazodone capsules: 50mg, 100mg tablets: 150mg	
Subsection	4.3.2. Monoamine-oxidase inhibitors (MAOIs)	
First Choice (reversible)	Moclobemide tablets: 150mg, 300mg	 following specialist initiation
Alternatives (non-reversible)	Phenelzine  tablets: 15mg	
Subsection	4.3.3. Selective serotonin re-uptake inhibitors	
First Choice	Sertraline tablets: 50mg, 100mg	
Alternatives	Citalopram tablets: 10mg, 20mg, 40mg	MHRA DSU (2016): Citalopram: suspected drug interaction with cocaine; prescribers should consider enquiring about illicit

	oral drops: 40mg/ml	drug use MHRA DSU: Citalopram and escitalopram: QT interval prolongation, Dec 2011
	Fluoxetine capsules: 20mg oral solution: 20mg/5ml	MHRA DSU: Fluoxetine: possible small risk of congenital cardiac defects, March 2010
Subsection	4.3.4 Other antidepressant drugs	
	GMMMG (2014): Agomelatine for major depressive episodes in adults	
First choice	Mirtazapine tablets: 15mg, 30mg, 45mg orodispersible tablets: 15mg, 30mg, 45mg	
Alternatives	Venlafaxine Tablets: 37.5mg, 75mg MR tablets: 37.5mg, 75mg, 150mg, 225mg	G_n specialist initiation for total daily doses \geq 300mg
	Duloxetine capsules: 30mg, 60mg	MHRA DSU: Duloxetine: regular assessment for suicidal ideation, Sept 2007
	Vortioxetine ▼ Tablets: 5, 10 and 20mg	G_n following specialist initiation NICE TA367: Vortioxetine for treating major depressive episodes

BNF Chapter	4 Central Nervous System	
Section	4.4 CNS stimulants and drugs for attention deficit hyperactivity disorder	
Subsection	ADHD adults	
	<p>NICE CG72: Attention deficit hyperactivity disorder</p> <p>NICE TA98: Methylphenidate, atomoxetine and dexamfetamine for ADHD in children and adolescents</p> <p>NTS recommendation: Methylphenidate, atomoxetine, dexamfetamine and lisdexamfetamine in the treatment of ADHD in adults</p>	
	Drug treatment of ADHD should be part of a comprehensive treatment programme that addresses psychological, behavioural and educational or occupational needs.	
First choice	<p>Methylphenidate U</p> <p>tablets: 5mg, 10mg, 20mg</p> <p>Modified release tablets</p> <p>Modified release capsules</p>	<p>U Unlicensed for treatment of adults</p> <p>A once patient stabilised as per SCG</p> <p>GM SCG: Methylphenidate, atomoxetine, dexamfetamine and lisdexamfetamine for ADHD in adults</p> <p>Different modified release preparations may not have the same clinical effect therefore prescribers should specify the brand to be supplied.</p>
Alternatives	<p>Atomoxetine</p> <p>capsules: 10mg, 18mg, 25mg, 40mg, 60mg, 80mg, 100mg</p>	<p>A once patient stabilised as per SCG</p> <p>GM SCG: Methylphenidate, atomoxetine, dexamfetamine and lisdexamfetamine for ADHD in adults</p> <p>MHRA DSU: Atomoxetine: increases in blood pressure and heart rate, Jan 2012</p>
	<p>Lisdexamfetamine</p> <p>capsules: 30mg, 50mg, 70mg</p>	<p>A once patient stabilised as per SCG</p> <p>GM SCG: Methylphenidate, atomoxetine, dexamfetamine and lisdexamfetamine for ADHD in adults</p>

Section	4.4 CNS stimulants and drugs for attention deficit hyperactivity disorder	
Subsection	CNS stimulants	
First choice	<p>Modafinil tablets: 100mg, 200mg</p>	<p>A Sleepiness associated with narcolepsy</p> <p>MHRA DSU: Modafinil now restricted to narcolepsy, March 2011</p> <p>NTS recommendation: The group does NOT recommend the use of modafinil for chronic shift-work sleep disorder</p>

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Section	4.5 Drugs used in the treatment of obesity


	NTS recommendation: Liraglutide for the treatment of obesity	
Subsection	4.5.1 Anti-obesity drugs acting on the gastro-intestinal tract	
	NICE CG189: Obesity: identification, assessment and management of overweight and obesity in children, young people and adults	
First choice	Orlistat capsules: 120mg	

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Section	4.6	Drugs used in nausea and vertigo
Vomiting in pregnancy		

First choice	Cyclizine U tablets: 50mg	
Alternatives	Prochlorperazine U tablets: 5mg	
	Metoclopramide U tablets: 10mg	MHRA DSU: Metoclopramide: risk of neurological adverse effects, Aug 2013
Postoperative nausea and vomiting		
	Local centres may have variations within their local postoperative nausea and vomiting guidelines.	
First choice	Cyclizine tablets: 50mg	
	Prochlorperazine tablets: 5mg buccal tablets: 3mg	
Alternatives 5HT3- receptor antagonists	Granisetron tablets: 1mg	R post-op or following chemotherapy
	Ondansetron tablets: 4mg, 8mg	R post-op or following chemotherapy Gn For exceptional use in non oncology patients with chronic emesis following consultant recommendation and where all other options have failed
Motion sickness		
First choice	Hyoscine hydrobromide chewable tablets: 150microgram, 300 microgram patches : 1mg/72 hours	
Alternatives	Cinnarizine tablets:15mg	
Vertigo / Meniere's		
First choice	Betahistine tablets: 8mg, 16mg	


Alternatives	Cinnarizine tablets: 15mg	
	Prochlorperazine tablets :5mg buccal tablets: 3mg	Acute symptoms only

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Section	4.7 Analgesics	
Subsection	4.7.1 Non-opioid analgesics and compound analgesic preparations	
	Compound analgesic preparations that contain a simple analgesic (such as paracetamol) with an opioid component reduce the scope for effective titration of the individual components and are not recommended	
First choice	Paracetamol tablets: 500mg	
Alternatives	Paracetamol capsules: 500mg soluble tablets: 500mg oral suspension: 250mg/5ml suppositories: 500mg, 1g	Avoid prescribing soluble or effervescent analgesics in patients with cardiovascular disease, renal disease or hypertension due to high levels of salt
	Co-codamol  tablets 30mg/500mg soluble tablets 30mg /500mg	
Additional Notes		
For options on non-steroidal anti-inflammatory drugs (NSAIDs) please refer to Chapter 10: Musculoskeletal and joint diseases.		
NICE NG59: Low back pain and sciatica in over 16s: assessment and management		
Subsection	4.7.2 Opioid analgesics	
Weak opioid		
First choice	Codeine phosphate tablets: 15mg, 30mg, 60mg	
Alternatives	Dihydrocodeine tartrate tablets: 30mg	
Moderate opioid		
First choice	Tramadol hydrochloride capsules: 50mg	
Alternatives	Buprenorphine patch 7 days: 5 microgram / hour, 10 microgram / hour, 15 microgram/hour, 20 microgram / hour 4 days: 35 microgram/hour, 52.5 microgram/hour, 70 microgram/hour 3 days: 35 microgram / hour, 52.5 microgram, 70 microgram / hour	Buprenorphine patch: Different brands are NOT interchangeable Patches should be prescribed by brand as the frequency to be applied may vary between brands

Strong opioid		
	<p>NICE CG140: Opioids in palliative care: safe and effective prescribing of strong opioids for pain in palliative care of adults</p> <p>NICE NG46: Controlled drugs: safe use and management</p>	
First choice	<p>Morphine sulfate</p> <p>tablets: 10mg, 20mg, 50mg</p> <p>oral solution: 10mg/5ml</p> <p>MR capsules (12-hourly): 10mg, 30mg, 60mg, 100mg, 200mg</p> <p>MR tablets (12-hourly): 5mg, 10mg, 15mg, 30mg, 60mg, 100mg</p>	<p>MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015</p>
Alternatives	<p>Fentanyl</p> <p>(72 hourly) patches: 12 microgram/hour, 25 microgram/hour, 50 microgram/hour, 37.5 microgram/hour, 75 microgram/hour, 100 microgram/hour</p>	<p>NTS recommendation: Oromucosal (Actiq®), Effentora®, Abstral®) and nasal (Instanyl®) fentanyl for breakthrough cancer pain</p> <p>MHRA DSU: Serious and fatal overdose of fentanyl patches, Sept 2008</p>
	<p>Oxycodone hydrochloride</p> <p>capsules: 5mg, 10mg, 20mg</p> <p>oral solution: 5mg/5ml</p> <p>modified release tablets: 5mg, 10mg, 15mg, 20mg, 30mg, 40mg, 60mg, 80mg, 120mg</p>	<p>NTS recommendation: Oxycodone/Naloxone MR (Targinact) for severe non-malignant pain</p>




Subsection	4.7.3 Neuropathic Pain	
	NICE CG173: Neuropathic pain - pharmacological management GMMMG: Neuropathic Pain NTS recommendation: Sativex for non-MS neuropathic pain (unlicensed)	
First choice	Amitriptyline tablets: 10mg, 25mg, 50mg oral solution: 25mg/5ml, 50mg/5ml	
	Gabapentin capsules: 100mg, 300mg, 400mg tablets: 600mg	MHRA DSU: Gabapentin (Neurontin): risk of severe respiratory depression, Oct 2017
Alternatives to amitriptyline	Imipramine tablets: 10mg, 25mg	Only if adverse effects to amitriptyline
Alternative to gabapentin	Pregabalin capsules: 25mg, 50mg, 75mg, 100mg, 150mg, 200mg, 225mg, 300mg	 Pregabalin only appropriate if gabapentin is effective but not tolerated due to side effects
Alternatives	Duloxetine capsules: 30mg, 60mg	Duloxetine can be considered when a clear diagnosis of diabetic neuropathy
	Tramadol capsules: 50mg	Consider tramadol only if acute rescue therapy is needed for a short treatment duration
Trigeminal neuralgia		
First choice	Carbamazepine tablets: 100mg, 200mg, 400mg	
Alternative	Gabapentin capsules: 300mg tablets: 600mg	MHRA DSU: Gabapentin (Neurontin): risk of severe respiratory depression, Oct 2017


Subsection	4.7.4 Antimigraine drugs	
	NICE CG150: Headaches	
	4.7.4.1 Treatment of acute migraine	
	GMMMG: Northwest headache pathway GMMMG: Northwest headache pathway guideline notes	
Analgesics		
	A simple analgesic such as aspirin, paracetamol (preferably in a soluble or dispersible form) or an NSAID (10.1.1) is often effective; concomitant antiemetic treatment may be required.	
	Aspirin tablets 300mg soluble tablets 300mg	
	Paracetamol tablets: 500mg soluble tablets: 500mg	
5HT1-receptor agonists		
First choice	Sumatriptan tablets: 50mg, 100mg	
Alternatives	Sumatriptan nasal spray: 10mg per actuation, 20mg per actuation	
	Naratriptan tablets: 2.5mg	
Antiemetics		
	Domperidone tablets: 10mg	MHRA DSU: Domperidone: risks of cardiac side effects, May 2014
	Metoclopramide tablets: 10mg	MHRA DSU: Metoclopramide: risk of neurological adverse effects, Aug 2013
4.7.4.2 Prophylaxis of migraine		
First choice	Propranolol tablets: 80mg MR capsules: 80mg	
Alternatives	Topiramate	 following specialist advice

	tablets: 25mg, 50mg, 100mg	
	Botulinum toxin type A (Botox®) 50-unit vial, 100-unit vial, 200-unit vial	<div style="text-align: center;">R</div> NICE TA260: Botulinum toxin type A for the prevention of headaches in adults with chronic migraine
4.7.4.3 Cluster headache and the trigeminal autonomic cephalalgias		
First choice	Sumatriptan subcutaneous injection: 6mg/0.5mL syringe	
Alternatives	Sumatriptan nasal spray U : 10mg per actuation, 20mg per actuation	



BNF Chapter	4 Central nervous system	
Section	4.8 Antiepileptic drugs	
Subsection	4.8.1 Control of the epilepsies	
	<p>Initiation and withdrawal of therapy must only be managed by a specialist.</p> <p>Drugs that are not routinely prescribed are not included in the formulary however if a specialist recommends a drug and it is listed as '  following specialist advice' within the RAG list then the patient can be prescribed that treatment.</p> <p>NICE CG137 The epilepsies: the diagnosis and management of the epilepsies in adults and children in primary and secondary care</p>	
	<p>MHRA DSU: Antiepileptic drugs: New advice on switching between different manufacturers' products for a particular drug, Nov 2013</p> <p>Category 1 – Supply a specific manufacturer’s product: phenytoin, carbamazepine, phenobarbital, primidone</p> <p>Category 2 - Continued supply of a particular manufacturer’s product should be based on clinical judgement and consultation with the patient and / or carer: valproate, lamotrigine, perampanel, rufinamide, clobazam, clonazepam, oxcarbazepine, eslicarbazepine, zonisamide, topiramate</p> <p>Category 3 – Unnecessary to supply a particular manufacturer’s product unless patient anxiety, risk of confusion or dosing errors: levetiracetam, lacosamide, tiagabine, gabapentin, pregabalin, ethosuximide, vigabatrin</p>	
	<p>MHRA DSU: St Johns Wort may interact with antiepileptics, Nov 2007</p> <p>MHRA DSU: Antiepileptics adverse effects on bone, April 2009</p>	
Most commonly prescribed		
Alphabetical order	<p>Carbamazepine</p> <p>MR tablets: 200mg, 400mg</p> <p>tablets: 100mg, 200mg, 400mg</p>	<p> following specialist advice</p> <p>MHRA DSU: Carbamazepine, oxcarbazepine and eslicarbazepine: potential risk of serious skin reactions, Dec 2012</p>
	<p>Lamotrigine</p> <p>tablets: 25mg, 50mg, 100mg, 200mg</p> <p>dispersible tablets: 25mg, 100mg</p>	<p> following specialist advice</p>
	<p>Levetiracetam</p> <p>tablets: 250mg, 500mg, 750mg, 1g</p> <p>oral solution: 100mg/ml</p>	<p> following specialist advice</p>
	<p>Sodium valproate</p> <p>EC tablets 200mg, 500mg</p> <p>MR tablets: 200mg, 300mg, 500mg</p> <p>SF liquid : 200mg/5ml</p>	<p> following specialist advice</p> <p>MHRA DSU: Medicines related to valproate: risk of abnormal pregnancy outcomes, Jan 2015</p> <p>MHRA DSU: Valproate and of risk of abnormal pregnancy outcomes:</p>





		new communication materials, Feb 2016 MHRA DSU: Valproate and developmental disorders: new alert asking for patient review and further consideration of risk minimization measures
Other drugs		
Alphabetical order	Clobazam tablets: 10mg	Gn following specialist advice
	Clonazepam tablets: 500microgram, 2mg	Gn following specialist advice MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015
	Gabapentin capsules: 100mg, 300mg, 400mg	Gn following specialist advice MHRA DSU: Gabapentin (Neurontin): risk of severe respiratory depression, Oct 2017
	Lacosamide tablets: 50mg, 100mg, 150mg, 200mg oral solution: 10mg/ml	Gn following specialist advice NTS recommendation: Lacosamide as adjunctive therapy for partial onset seizures
	Oxcarbazepine tablets: 150mg, 300mg, 600mg suspension 300mg/5ml	Gn following specialist advice MHRA DSU: Carbamazepine, oxcarbazepine and eslicarbazepine: potential risk of serious skin reactions, Dec 2012
	Phenobarbital tablets: 15mg, 30mg, 60mg	Gn following specialist advice
	Phenytoin capsules: 25mg, 50mg, 100mg suspension: 30mg/5ml	Gn following specialist advice MHRA DSU: Risk of Stevens-Johnson syndrome, Jan 2010
	Pregabalin capsules: 25mg, 50mg, 75mg, 100mg, 150mg, 200mg, 225mg, 300mg	Gn following specialist advice
	Primidone tablets: 50mg, 250mg	Gn following specialist advice

	Topiramate tablets : 25mg, 50mg, 100mg, 200mg	 following specialist advice
	Zonisamide capsules : 25mg, 50mg, 100mg	 following specialist advice
Subsection	4.8.2 Drugs used in status epilepticus	
First choice	Midazolam hydrochloride oromucosal solution 5mg/ml: 2ml syringe (Buccolam▼)	 specialist initiation MHRA DSU: Buccal midazolam, Oct 2011
Alternatives	Diazepam rectal tubes: 2.5mg, 5mg, 10mg	MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015

Chapter	4. Central nervous system	
Section	4.9 Drugs used in parkinsonism and related disorders	
	Drugs that are not routinely prescribed are not included in the formulary however if a specialist recommends a drug and it is listed as ' Gn following specialist advice' within the RAG list then the patient can be prescribed that treatment.	
	<p>NICE CG35: Parkinson's disease states that it is not possible to identify a universal first-choice drug therapy for people with PD. The choice of drug first prescribed should take into account:</p> <ul style="list-style-type: none"> • clinical and lifestyle characteristics • patient preference, after the patient has been informed of the short and long-term benefits and drawbacks of the drug classes. <p>Brand prescribing may be considered where differences in appearance of a medication may cause a patient anxiety or where familiarity with a particular product in a particular device is important e.g. with apomorphine.</p>	
Subsection	4.9.1 Dopaminergic drugs used in Parkinson's disease	
	MHRA (2007) Dopamine agonists: pathological gambling, increased libido and hypersexuality	
Dopamine-receptor agonists		
First line	Pramipexole tablets: 88microgram, 180microgram, 350microgram, 700microgram	Gn following specialist advice
	Ropinirole tablets: 250microgram, 500microgram, 1mg, 2mg, 5mg	Gn following specialist advice
	Rotigotine 24 hour patch: 1mg, 2mg, 4mg, 6mg, 8mg	Gn following specialist advice NTS recommendation: Rotigotine patches
Second line	Pramipexole modified release tablets: 260microgram, 520microgram, 1.05mg, 1.57 mg, 2.1mg, 3.15mg	Gn following specialist advice
	Ropinirole modified release tablets: 2mg, 4mg, 8mg	Gn following specialist advice
Third line	MHRA DSU: Ergot-derived dopamine agonists: risk of fibrotic reactions, Oct 2008	
	Apomorphine injection : 10mg/ml : 2ml amp, 5ml amp pens: 10mg/ml: 3ml pen injector pre-filled syringes: 5mg/ml: 10ml PFS	 MHRA DSU: SGLT2 inhibitors: updated advice on the risk of diabetic ketoacidosis (April 2016)

Levodopa		
First line (levodopa with dopa-decarboxylase inhibitor)	Co-beneldopa capsules: 12.5/50, 25/100, 50/200 dispersible tablets 12.5/50, 25/100 modified release capsules: 25/100	Gn following specialist advice
	Co-careldopa tablets: 10/100, 25/100, 25/250 modified release tablets:25/100, 50/200	Gn following specialist advice
	Co-careldopa with entacapone Stalevo – see BNF for various strengths	Gn following specialist advice
Monoamine-oxidase-B inhibitors		
	Rasagiline tablets: 1mg	Gn following specialist advice
	Safinamide▼ tablets : 50mg, 100mg	Gn following specialist advice GMMMG recommendation: Safinamide(Xadago®▼) for the management of mid-late Parkinson’s disease
	Selegiline tablets: 5mg, 10mg	Gn following specialist advice
Catechol-O-methyltransferase inhibitors		
First line	Entacapone tablets: 200mg	Gn following specialist advice
Second line	Opicapone▼ Hard capsules: 50mg	Gn following specialist advice GMMMG recommendation: Opicapone (Ongentys®▼) for the management of mid-late Parkinson’s disease
Amantadine		
	Amantadine capsules: 100mg oral solution: 50mg/5ml	Gn following specialist advice

Subsection	4.9.2 Antimuscarinic drugs used in parkinsonism	
	Not recommended due to association with cognitive impairment. Not recommended in the elderly due to toxicity and risk of aggravating dementia.	
First choice	Procyclidine tablets: 5mg sugar free syrup: 2.5mg/5ml, 5mg/5ml	
Alternatives	Orphenadrine tablets: 50mg	
Subsection	4.9.3 Drugs used in essential tremor, chorea, tics and related disorders	
	Riluzole tablets: 50mg	 NICE TA20: Riluzole for motor neurone disease NICE NG42: MND:assessment and management
Additional Notes		
<p>Propranolol (section 2.4) may be useful in treating essential tremor or tremors associated with anxiety of thyrotoxicosis.</p> <p>Specialist centres will advise on suitable alternative options for essential tremor, chorea, tics and related disorders.</p>		

BNF Chapter	4 Central Nervous System	
Section	4.10 Drugs used in substance dependence	
Subsection	4.10.1 Alcohol dependence	
	NICE CG115: Alcohol dependence and harmful alcohol use NICE NG58: Coexisting severe mental illness and substance misuse: community health and social care services	
Alphabetical order	Acamprosate gastro-resistant tablets: 333mg	 In conjunction with specialist service
	Chlordiazepoxide capsules: 5mg, 10mg tablets: 5mg, 10mg	For detoxification as a short course to aid alcohol withdrawal
	Disulfiram tablets: 200mg	 Patient must be stabilised prior to transfer of prescribing. (> 3 months) GM SCG: Disulfiram in the treatment of alcohol dependence
	Nalmefene▼ tablets: 18mg	 In conjunction with specialist service GMMMG (2014): Nalmefene for alcohol dependence NICE (2014): Nalmefene for reducing alcohol consumption in people with alcohol dependence, TA325 NICE HTTA325 (2015): Nalmefene
Naltrexone tablets: 50mg	 Recommended in NICE guidance for max 6 months duration. To remain under specialist community alcohol teams	
Subsection	4.10.2 Cigarette smoking	
	Therapy is chosen according to the smoker's likely compliance, availability of counselling and support, previous experience of smoking cessation aids, contra-indications and adverse effects of the products and smokers preference.	
	MHRA DSU: Smoking and smoking cessation: clinically significant interactions with commonly used medicines, Oct 2009 NICE PH45: Tobacco: harm-reduction approaches to smoking	

First choice	<p>Nicotine</p> <p>patches 16 hour: 5mg, 10mg, 15mg, 25mg</p> <p>patches 24 hour: 7mg, 14mg, 21mg</p> <p>chewing gum: 2mg, 4mg</p> <p>lozenges: 2mg, 4mg</p> <p>inhalator cartridges: 10mg, 15mg</p> <p>oral spray: 1mg</p>	
Alternatives	<p>Varenicline▼</p> <p>2 week starter pack: 11x500 microgram with 14x1mg tablets</p> <p>tablets: 500mcg, 1mg</p>	<p>NICE TA123: Varenicline for smoking cessation</p> <p>Varenicline should normally be prescribed only as part of a programme of behavioural support.</p> <p>Clinicians should be aware of the possible emergence of significant depressive symptoms when using varenicline</p>
	<p>Bupropion hydrochloride</p> <p>modified release tablets: 150mg</p>	
Additional Notes		
The combination of NRT with varenicline▼ or bupropion is not recommended		
Subsection	4.10.3 Opioid dependence	
	NICE (2007): Methadone and buprenorphine for the management of opioid dependence (TA114)	
First choice	<p>Methadone</p> <p>oral solution: 1mg/1ml</p>	<p>MHRA DSU: Drugs and driving: blood concentration limits set for certain drugs, Feb 2015</p> <p>RAG status depends on local commissioning arrangements for substance misuse or if GP with specialist interest</p>
Alternatives	<p>Buprenorphine</p> <p>sublingual tablets: 400microgram, 2mg, 8mg</p>	RAG status depends on local commissioning arrangements for substance misuse or if GP with specialist interest
	<p>Lofexidine</p> <p>tablets: 200microgram</p>	Lofexidine for detoxification
	<p>Naltrexone</p> <p>tablets: 50mg</p>	<p>For alcohol disorders R</p> <p>NICE TA115: Naltrexone for the management of opioid dependence</p> <p>For opioid dependence: RAG status depends on local</p>

		commissioning arrangements for substance misuse or if GP with specialist interest
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BNF Chapter	4 Central Nervous System	
Section	4.11 Drugs for dementia	
	NICE CG42: Dementia: supporting people with dementia and their carers in health and social care NICE TA217: Alzheimer's disease - donepezil, galantamine, rivastigmine and memantine	
First choice	Donepezil tablets: 5mg, 10mg SF orodispersible tablets: 5mg, 10mg	G_n (following specialist initiation)
Alternatives	Galantamine tablets: 8mg, 12mg modified release capsules: 8mg, 16mg, 24mg	G_n (following specialist initiation)
	Rivastigmine capsules : 1.5mg, 3mg, 4.5mg, 6mg patches: 4.6mg/24hours, 9.5mg/24 hours	G_n (following specialist initiation) NTS recommendation: Rivastigmine for Dementia with Lewy Bodies NTS recommendation: Rivastigmine for Parkinson's disease dementia MHRA DSU: Rivastigmine transdermal patch: risk of medication errors, June 2010
	Memantine tablets: 10mg, 20mg	G_n (following specialist initiation) MHRA DSU: Memantine pump device: risk of medication errors Nov 2010