

1 **APPENDIX Q- Unit costs of anti-epileptic drugs for 2011 guideline**

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Unit costs and weighted average unit costs for drug used in the treatment of focal and generalised epilepsies						
Drug name	Prescription Cost Analysis 2008 ¹		BNF 2010 ²			Weighted average cost/mg (£)
	Quantity (thousands)	Usage weight (quantity/total)	Mg/Unit	Units/pack	Cost/pack	
Carbamazepine						0.00103
Carbamazepine_Tab 100mg	28,343.879	0.275	100	28	£6.02	0.00215
Tegretol_Tab 100mg	13,950.636	0.135	100	84	£2.43	0.00029
Tegretol Chewtab_Tab Chble 100mg	906.067	0.009	100	56	£3.72	0.00066
Carbamazepine_Tab 200mg	31,220.109	0.303	200	28	£5.53	0.00099
Tegretol_Tab 200mg	18,011.791	0.175	200	84	£4.50	0.00027
Tegretol Chewtab_Tab Chble 200mg	1,017.260	0.010	200	56	£6.92	0.00062
Carbamazepine_Tab 400mg	5,922.096	0.057	400	28	£6.59	0.00059
Tegretol_Tab 400mg	3,747.428	0.036	400	56	£5.90	0.00026
Carbamazepine Modified Release						0.00047
Carbagen SR_Tab 200mg	174.353	0.003	200	56	£4.88	0.00044
Tegretol Ret_Divitab 200mg	34,293.787	0.632	200	56	£5.30	0.00047
Carbagen SR_Tab 400mg	53.122	0.001	400	56	£9.63	0.00043
Tegretol Ret_Divitab 400mg	19,722.059	0.364	400	56	£10.44	0.00047
Eslicarbazepine						0.00643
Zebinix_Tab 800 mg	BNF	1.000	800	30	£154.20	0.00643
Oxcarbazepine						0.00134
Oxcarbazepine_Tab 150mg	961.433	0.232	150	50	£9.91	0.00132
Trileptal_Tab 150mg	103.370	0.025	150	50	£10.00	0.00133
Oxcarbazepine_Tab 300mg	1,921.425	0.465	300	50	£20.14	0.00134
Trileptal_Tab 300mg	252.028	0.061	300	50	£20.00	0.00133
Oxcarbazepine_Tab 600mg	797.257	0.193	600	50	£40.18	0.00134
Trileptal_Tab 600mg	100.395	0.024	600	50	£40.00	0.00133
Gabapentin						0.00028
Gabapentin_Cap 100mg	35,362.243	0.196	100	100	£3.94	0.00039
Neurontin_Cap 100mg	312.554	0.002	100	100	£18.29	0.00183
Gabapentin_Cap 300mg	119,783.183	0.665	300	100	£5.52	0.00018
Neurontin_Cap 300mg	1,922.583	0.011	300	100	£42.40	0.00141
Gabapentin_Cap 400mg	10,037.696	0.056	400	100	£5.91	0.00015
Neurontin_Cap 400mg	420.444	0.002	400	100	£49.06	0.00123
Gabapentin_Tab 600mg	10,751.519	0.060	600	100	£41.06	0.00068
Neurontin_Tab 600mg	186.128	0.001	600	100	£84.80	0.00141
Gabapentin_Tab 800mg	1,244.665	0.007	800	100	£54.19	0.00068
Neurontin_Tab 800mg	44.268	0.000	800	100	£98.13	0.00123
Pregabalin						0.01584
Lyrica_Cap 25mg	5,294.631	0.085	25	56	£64.40	0.04600
Lyrica_Cap 50mg	10,363.528	0.167	50	84	£96.60	0.02300
Lyrica_Cap 75mg	19,037.079	0.307	75	56	£64.40	0.01533

Unit costs and weighted average unit costs for drug used in the treatment of focal and generalised epilepsies						
Drug name	Prescription Cost Analysis 2008 ¹		BNF 2010 ²			Weighted average cost/mg (£)
	Quantity (thousands)	Usage weight (quantity/total)	Mg/Unit	Units/pack	Cost/pack	
Lyrice_Cap 100mg	6,631.439	0.107	100	84	£96.60	0.01150
Lyrice_Cap 150mg	12,370.116	0.199	150	56	£64.60	0.00769
Lyrice_Cap 200mg	2,703.720	0.044	200	84	£96.60	0.00575
Lyrice_Cap 225mg	91.825	0.001	225	56	£64.40	0.00511
Lyrice_Cap 300mg	5,539.575	0.089	300	56	£64.40	0.00383
Lacosamide						0.01287
Vimpat_Tab 50mg	11.753	0.673	50	14	£9.01	0.01287
Vimpat_Tab 100mg	5.710	0.327	100	14	£18.02	0.01287
Vimpat_Tab 100mg	BNF		100	56	£72.08	0.01287
Vimpat_Tab 150mg	BNF		150	14	£27.03	0.01287
Vimpat_Tab 150mg	BNF		150	56	£108.12	0.01287
Vimpat_Tab 200mg	BNF		200	56	£144.16	0.01287
Lamotrigine						0.00380
Lamictal_Tab Disper 2mg	12.700	0.000	2	30	£10.45	0.17417
Lamotrigine_Tab Disper 5mg	2,202.826	0.027	5	28	£2.67	0.01907
Lamictal_Disper Tab 5mg	216.587	0.003	5	28	£7.82	0.05586
Lamotrigine_Tab 25mg	13,530.867	0.165	25	56	£2.77	0.00198
Lamictal_Tab 25mg	1,563.729	0.019	25	56	£19.61	0.01401
Lamotrigine_Tab Disper 25mg	5,355.181	0.065	25	56	£3.41	0.00244
Lamictal_Disper Tab 25mg	1,067.487	0.013	25	56	£19.61	0.01401
Lamotrigine_Tab 50mg	18,686.056	0.228	50	56	£3.73	0.00133
Lamictal_Tab 50mg	2,488.610	0.030	50	56	£33.35	0.01191
Lamotrigine_Tab 100mg	22,343.027	0.273	100	56	£9.63	0.00172
Lamictal_Tab 100mg	3,575.992	0.044	100	56	£57.53	0.01027
Lamotrigine_Tab Disper 100mg	2,842.949	0.035	100	56	£6.50	0.00116
Lamictal_Disper Tab 100mg	516.704	0.006	100	56	£57.53	0.01027
Lamotrigine_Tab 200mg	6,208.746	0.076	200	30	£27.53	0.00459
Lamictal_Tab 200mg	1,345.826	0.016	200	56	£97.79	0.00873
Levetiracetam						0.00183
Keppra_Tab 250mg	13,064.790	0.326	250	60	£29.70	0.00198
Keppra_Tab 500mg	19,692.355	0.491	500	60	£52.30	0.00174
Keppra_Tab 750mg	2,176.527	0.054	750	60	£89.10	0.00198
Keppra_Tab 1g	5,191.151	0.129	1000	60	£101.10	0.00169
Tiagabine						0.08336
Gabitril_Tab 5mg	208.441	0.586	5	100	£41.68	0.08336
Gabitril_Tab 10mg	90.375	0.254	10	100	£83.36	0.08336
Gabitril_Tab 15mg	56.591	0.159	15	100	£125.04	0.08336
Topiramate						0.01206
Topamax_Sprinkle Cap 15mg	1,411.548	0.051	15	60	£15.09	0.01677
Topamax_Tab 25mg	7,860.108	0.283	25	60	£19.68	0.01312
Topamax_Sprinkle Cap 25mg	3,195.348	0.115	25	60	£22.63	0.01509
Topamax_Tab 50mg	5,771.918	0.208	50	60	£32.33	0.01078
Topamax_Sprinkle Cap 50mg	2,344.110	0.084	50	60	£37.18	0.01239
Topamax_Tab 100mg	5,501.050	0.198	100	60	£57.91	0.00965

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Drug name	Prescription Cost Analysis 2008 ¹		BNF 2010 ²			Weighted average cost/mg (£)
	Quantity (thousands)	Usage weight (quantity/total)	Mg/Unit	Units/pack	Cost/pack	
Topamax_Tab 200mg	1,732.206	0.062	200	60	£112.46	0.00937
Sodium Valproate						0.00035
Sod Valpr_Tab 100mg	6,765.912	0.073	100	100	£5.60	0.00056
Epilim_Crble Tab 100mg	5,153.266	0.056	100	100	£5.60	0.00056
Sod Valpr_Tab E/C 200mg	29,028.450	0.314	200	100	£5.35	0.00027
Epilim 200_Tab E/C 200mg	23,744.936	0.257	200	100	£7.70	0.00039
Sod Valpr_Tab E/C 500mg	13,940.187	0.151	500	100	£11.31	0.00023
Epilim 500_Tab E/C 500mg	13,887.265	0.150	500	100	£19.25	0.00039
Sodium Valproate liquid solutions						0.00062
Sod Valpr_Oral Soln 200mg/5ml S/F	72,493.449	0.469	200	60	£6.13	0.00051
Epilim_Liq 200mg/5ml S/F	44,694.524	0.289	200	60	£9.33	0.00078
Epilim_Syr 200mg/5ml	37,281.177	0.241	200	60	£7.78	0.00065
Vigabatrin						0.00062
Sabril_Tab 500mg	1,297.353	1.000	500	100	£30.84	0.00062
Zonisamide						0.01565
Zonegran_Cap 25mg	596.112	0.196	25	14	£8.82	0.02520
Zonegran_Cap 50mg	926.105	0.305	50	56	£47.04	0.01680
Zonegran_Cap 100mg	1,518.816	0.499	100	56	£62.72	0.01120
Clobazam						0.01560
Clobazam_tab 10 mg	BNF	1.000	10	30	4.68	0.01560
Clonazepam						0.06922
Rivotril_tab 0.5 mg	10,518.978	0.877	0.5	100	3.77	0.07540
Rivotril_tab 2 mg	1,474.981	0.123	2	100	5.03	0.02515
Phenobarbitone						0.00114
Phenobarbital_tab 15 mg	1,680.280	0.089	15	28	0.85	0.00202
Phenobarbital_tab 30 mg	13,008.542	0.691	30	28	1.06	0.00126
Phenobarbital_tab 60 mg	4,149.979	0.220	60	28	0.66	0.00039
Ethosuximide						0.00047
Emeside_Syr Paed 250mg/5ml Blkcurrant	680.672	0.829	250	40	6.6	0.00066
Zarontin_Syr 250mg/5ml	3,295.646					0.00043
Ethosuximide capsules 250mg	BNF		250	56	38.23	0.00273

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3 Liquid and syrup preparations as well as suppositories were excluded from the cost calculation of all
4 costs except those for ethosuximide and sodium valproate. The exclusion of these preparations is not
5 expected to impact the weighted average cost of any drug as they represent a very small minority of
6 prescriptions. However, for ethosuximide, the unit cost of the syrup preparation is much lower than the
7 cost for capsules. Therefore, for ethosuximide, the weight average presented in the table above is
8 comprised only of ethosuximide syrup.

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Drug treatment for convulsive status epilepticus	
Indication / Dose	Acquisition cost
Clonazepam	
<ul style="list-style-type: none"> By intravenous injection into a large vein (over at least 2 minutes) or by intravenous infusion, 1 mg, repeated if necessary; child all ages, 500 micrograms 	Rivotril® <ul style="list-style-type: none"> Injection, clonazepam 1 mg/mL in solvent, net price 1-mL amp (with 1 mL water for injections) = 61p
Diazepam	
<ul style="list-style-type: none"> Status epilepticus and febrile convulsions, by intravenous injection, 10 mg at a rate of 1 mL (5 mg) per minute, repeated once after 10 minutes if necessary; child under 12 years, 300–400 micrograms/kg [unlicensed dose], repeated once after 10 minutes if necessary By rectum as rectal solution, adult and child over 12 years, 10–20 mg, repeated once after 10–15 minutes if necessary (max. 30 mg); elderly 10 mg (max. 15 mg); neonate [unlicensed] 1.25–2.5 mg; child 1 month–1 year [unlicensed] 5 mg; 1–2 years 5 mg; 2–12 years 5–10 mg 	Diazepam (Non-proprietary) <ul style="list-style-type: none"> Injection (solution), diazepam 5 mg/mL Net price 2-mL amp = 45p Injection (emulsion), diazepam 5 mg/mL (0.5%). See Appendix 6. Net price 2-mL amp = 92p Rectal tubes (= rectal solution), diazepam 2 mg/mL, net price 1.25-mL (2.5-mg) tube = 90p, 2.5-mL (5-mg) tube = £1.67; 4 mg/mL, 2.5-mL (10-mg) tube = £1.65
Fosphenytoin	
<ul style="list-style-type: none"> Status epilepticus, by intravenous infusion (at a rate of 100–150 mg(PE)/minute), initially 20 mg(PE)/kg then by intravenous infusion (at a rate of 50–100 mg(PE)/minute), 4–5 mg(PE)/kg daily in 1–2 divided doses, dose adjusted according to response and trough plasma-phenytoin concentration child 5 years and over, by intravenous infusion (at a rate of 2–3 mg(PE)/kg/minute), initially 20 mg(PE)/kg then by intravenous infusion (at a rate of 1–2 mg(PE)/kg/minute), 4–5 mg(PE)/kg daily in 1–4 divided doses, dose adjusted according to response and trough plasma-phenytoin concentration 	Pro-Epanutin® <ul style="list-style-type: none"> Injection, fosphenytoin sodium 75 mg/mL (equivalent to phenytoin sodium 50 mg/mL), net price 10-mL vial = £40.00
Midazolam	
<ul style="list-style-type: none"> By buccal administration [unlicensed], adult and child over 10 years, 10 mg repeated once after 10 minutes if necessary; child up to 6 months, 300 micrograms/kg (max. 2.5 mg); 6 months–1 year, 2.5 mg; 1–5 years, 5 mg; 5–10 years, 7.5 mg Conscious sedation, by intravenous administration, neonate, initially by intravenous injection 150–200 micrograms/kg followed by continuous infusion of 1 microgram/kg/minute (increased by 1 microgram/kg/minute every 15 minutes until seizure controlled; max 5 micrograms/kg/minute); child 1 month–18 years, initially by continuous intravenous infusion of 1 microgram/kg/minute (increased by 1 	Midazolam (Non-proprietary) <ul style="list-style-type: none"> Oral liquid, midazolam 2.5 mg/mL, 100 mL Available from 'special-order' manufacturers or specialist importing companies Injection, midazolam (as hydrochloride) 1 mg/mL, net price 2-mL amp = 50p, 5-mL amp = 60p, 50-mL vial = £7.87; 2 mg/mL, 5-mL amp = 65p; 5 mg/mL, 2-mL amp = 58p, 10-mL amp = £2.50 Hypnovel® <ul style="list-style-type: none"> Injection, midazolam (as hydrochloride) 2 mg/mL, net price 5-mL amp = 86p; 5 mg/mL, 2-mL amp = 73p

<p>microgram/kg/minute every 15 minutes until seizure controlled; max 5 micrograms/kg/minute)</p> <ul style="list-style-type: none"> • Sedative in combined anaesthesia, by intravenous injection, 30-100 micrograms/kg repeated as required or by continuous intravenous infusion, 30–100 micrograms/kg/hour (elderly lower doses needed); child not recommended • Premedication, by deep intramuscular injection, 70–100 micrograms/kg (elderly or debilitated 25–50 micrograms/kg) 20–60 minutes before induction; by intravenous injection, 1–2 mg 5–30 minutes before procedure, repeated as required (elderly or debilitated 0.5 mg, repeat dose slowly as required); • Induction (but rarely used), by slow intravenous injection, 150–200 micrograms/kg (elderly or debilitated 50–150 micrograms/kg) given in divided doses (max. 5 mg) at intervals of 2 minutes; max. total dose 600 micrograms/kg; child 7–18 years initially 150 micrograms/kg (max. 7.5 mg) given in steps of 50 micrograms/kg (max. 2.5 mg) over 2–5 minutes; wait for 2–5 minutes then give additional doses of 50 micrograms/kg (max. 2.5 mg) every 2 minutes if necessary; max. total dose 500 micrograms/kg (not exceeding 25 mg) • Sedation of patients receiving intensive care, by slow intravenous injection, initially 30–300 micrograms/kg given in steps of 1–2.5 mg every 2 minutes, then by slow intravenous injection or by continuous intravenous infusion, 30–200 micrograms/kg/hour; reduce dose (or reduce or omit initial dose) in hypovolaemia, vasoconstriction, or hypothermia; lower doses may be adequate if opioid analgesic also used; neonate under 32 weeks gestational age by continuous intravenous infusion, 30 micrograms/kg/hour, neonate over 32 weeks gestational age and child under 6 months 60 micrograms/kg/hour, child over 6 months by slow intravenous injection, initially 50–200 micrograms/kg, then by continuous intravenous infusion 	
<p>Paraldehyde</p> <ul style="list-style-type: none"> • By rectum (doses expressed as undiluted paraldehyde), adult and child over 12 years, 20 mL; child up to 3 months 0.5 mL, 3–6 months 1 mL, 6–12 months 1.5 mL, 1–2 years 2 mL, 2–5 years 3–4 mL, 5–12 years 5–10 mL 	<p>Paraldehyde (Non-proprietary)</p> <ul style="list-style-type: none"> • Enema, 8–50%, available from ‘special-order’ manufacturers or specialist importing companies
<p>Phenobarbital sodium</p>	

<ul style="list-style-type: none"> Status epilepticus, by intravenous injection (dilute injection 1 in 10 with water for injections), 10 mg/kg at a rate of not more than 100 mg/minute; max. 1 g 	<p>Phenobarbital (Non-proprietary)</p> <ul style="list-style-type: none"> Injection , phenobarbital sodium 200 mg/mL, net price 1-mL amp = £2.00
Phenytoin sodium	
<ul style="list-style-type: none"> By slow intravenous injection or infusion (with blood pressure and ECG monitoring), status epilepticus, 18 mg/kg at a rate not exceeding 50 mg per minute, as a loading dose (see also notes above); maintenance doses of about 100 mg should be given thereafter at intervals of every 6–8 hours, monitored by measurement of plasma concentrations; rate and dose reduced according to weight; child 18 mg/kg as a loading dose (neonate 15–20 mg/kg at rate of 1–3 mg/kg/minute) 	<p>Phenytoin (Non-proprietary)</p> <ul style="list-style-type: none"> Injection , phenytoin sodium 50 mg/mL with propylene glycol 40% and alcohol 10% in water for injections, net price 5-mL amp = £3.40 <p>Epanutin® Ready-Mixed Parenteral</p> <ul style="list-style-type: none"> Injection , phenytoin sodium 50 mg/mL with propylene glycol 40% and alcohol 10% in water for injections, net price 5-mL amp = £4.88

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Drug treatment for severe myoclonic epilepsy in infancy	
Indication / Dose	Acquisition cost
Stiripentol	
<ul style="list-style-type: none"> Severe myoclonic epilepsy in infancy, by mouth, child 3-18 years, initially 10 mg/kg in 2-3 divided doses; titrate dose over minimum of 3 days to max 50 mg/kg/day in 2-3 divided doses 	<p>Diacomit®</p> <ul style="list-style-type: none"> Capsules, stiripentol 250 mg, net price 60-cap pack = £248.00; 500 mg, 60-cap pack = £493.00. Powder, stiripentol 250 mg, net price 60-sachet pack = £284.00; 500 mg, 60-sachet pack = £493.00

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5 References

- 6 1 Department of Health. *Prescription Cost Analysis 2008*. Available from: [http://www](http://www.ic.nhs.uk/statistics-and-data-collections/primary-care/prescriptions/prescription-cost-analysis-2008) ic nhs
- 7 uk/statistics-and-data-collections/primary-care/prescriptions/prescription-cost-analysis-2008.
- 8 2 Joint Formulary Committee. *British National Formulary*. 59(March). 2010. London, British Medical
- 9 Association and Royal Pharmaceutical Society of Great Britain.