Table F-8. Epilepsy history and seizure type for studies comparing older versus newer antiepileptic drugs

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Study, Year | Group | N | New Onset Eiplepsy  (%) | Chronic  Epilepsy  (%) | Mean  age at Onset  (SD) | Mean Epilepsy Duration (SD) | Mean Number of Seizures in Past  (SD) | Partial Seizures  (%) | Simple  Partial  Seizures  (%) | Complex  Partial  Seizures  (%) | Generalized  Seizures (%) | Tonic-Clonic Seizures (%) | Absence  Seizures (%) | Other (%) |
| Reinikainen,  1987 | Carbamazepine | 18 | - | - | - | - | - | 39 | - | - | - | 22 | - | Mixed: 22  Unclassifiable: 5  Simple/complex partial: 17 |
| Oxcarbazepine | 16 | - | - | - | - | - | 25 | - | - | - | 38 | - | Mixed: 31  Unclassifiable: 6  Simple/complex partial: 6 |
| Danner,  1988 | Carbamazepine | 13 | - | - | - | - | - | - | - | - | - | - | - |  |
| Oxcarbazepine | 12 | - | - | - | - | - | - | - | - | - | - | - |  |
| Dam,  1989 | Carbamazepine | 100 | - | - | - | - | - | - | - | - | - | - | - |  |
| Oxcarbazepine | 94 | - | - | - | - | - | - | - | - | - | - | - |  |
| Sachdeo,  1992 | Valproate | 22 | - | 100 | - | - | - | 100 | - | - | - | - | - | - |
| Felbamate | 22 | - | 100 | - | - | - | 100 | - | - | - | - | - | - |
| Faught,  1993 | Valproic Acid | 55 | - | - | - | - | Mean Baseline Seizure Frequency per 28 days:  21.3 | 86 | - | - | - | 25 | - |  |
| Felbamate | 56 | - | - | - | - | Mean Baseline Seizure Frequency oper 28 days:  12.4 | 68 | - | - | - | 32 | - |  |

| Table F-8. Epilepsy history and seizure type for studies comparing older versus newer antiepileptic drugs (continued) | | | | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Study, Year** | **Group** | **N** | New Onset Eiplepsy  **(%)** | Chronic  Epilepsy  **(%)** | Mean  age at Onset  **(SD)** | **Mean Epilepsy Duration (SD)** | Mean Number of Seizures in Past  **(SD)** | Partial Seizures  **(%)** | Simple  Partial  Seizures  **(%)** | Complex  Partial  Seizures  **(%)** | Generalized  **Seizures (%)** | **Tonic-Clonic Seizures (%)** | Absence  **Seizures (%)** | **Other (%)** |
| Brodie,  1995 | Carbamazepine | 129 | 100 | - | - | - |  | 57 | - | - | - | 48 | - |  |
| Lamotrigine | 131 | 100 | - | - | - |  | 56 | - | - | - | 46 | - |  |
| Kalviainen,  1995 | Carbamazepine | 50 | - | - | - | - | - | 22 | - | 8 | 2 | - | - |  |
| Vigabatrin | 50 | - | - | - | - | - | 20 | - | 8 | 8 | - | - |  |
| Reunanen,  1996 | Carbamazepine | 117 | - | - | Mean age at first seizure: 28 | - | - | - | - | - | - | - | - | - |
| Lamotrigine100 mg | 115 | - | - | Mean age at first seizure: 29 | - | - | - | - | - | - | - | - | - |
| Lamotrigine 200 mg | 111 | - | - | Mean age at first seizure: 26 | - | - | - | - | - | - | - | - | - |
| Tanganelli,  1996 | Carbamazepine | 25 | - | - | - | - | - | - | - | 100 | - | - | - | - |
| Vigabratin | 26 | - | - | - | - | - | - | - | 100 | - | - | - | - |
| Bill,  1997 | Phenytoin | 144 | - | - | - | Mean duration since onset of seizures in weeks:  89.4 | Mean number of seizures at baseline: 20.0  Mean seizure frequency per week at baseline:  0.84 | 68.1 | - | - | 31.9 | - | - |  |
| Oxcarbazepine | 143 | - | - | - | Mean duration since onset of seizures in weeks:  94.6 | Mean number of seizures at baseline:  17.5  Mean seizure frequency per week at baseline:  0.98 | 58.7 | - | - | 40.6 | - | - | No seizure type defined: 0.7 |
| Christie,  1997 | Valproic Acid | 121 | 100 | - | - | Mean duration in weeks since onset:  181 | Mean seizure frequency per week at baseline:  1.09 | 64.5 | - | - | 35.5 | - | - |  |
| Oxcarbazepine | 128 | 122 | - | - | Mean duration in weeks since onset:  178 | Mean seizure frequency per week at baseline:  0.58 | 59.4 | - | - | 40.6 | - | - |  |
| Guerreiro,  1997 | Pheyntion | 96 | 100 | 0 | - | Mean number ofweeks since onset of seizures:  37.7 | - | 81.3 | - | - | 17.7 | - | - | No type indicated: 1 |
| Oxcarbazepine | 97 | 100 | 0 | - | Mean number ofweeks since onset of seizures:  30.2 | - | 75.2 | - | - | 22.7 | - | - | No type indicated: 2.1 |
| Chadwick,  1998 | Carbamazepine | 74 | 100 | - | - | Mean duration of epilepsy in months:  1.3 (2.3) | - | - | 43 | 43 | 50 | 23 | - |  |
| Gabapentin 300 mg | 72 | 100 | - | - | Mean duration of epilepsy in months:  1.0 (2.2) | - | - | 24 | 39 | 44 | 31 | - |  |
| Gabapentin 900 mg | 72 | 100 | - | - | Mean duration of epilepsy in months:  0.6 (1.0) | - | - | 29 | 44 | 53 | 19 | - |  |
| Gabapentin 1800 mg | 74 | 100 | - | - | Mean duration of epilepsy in months:  1.5 (4.5) | - | - | 36 | 46 | 55 | 15 | - |  |
| Brodie,  1999a | Carbamazepine | 48 | 100 | - | - | - | - | - | - | - | - | - | - |  |
| Lamotrigine | 102 | 100 | - | - | - | - | - | - | - | - | - | - |  |
| Brodie,  1999b | Valproic Acid | 107 | - | 100 | - | - | Mean number of seizures at baseline per month:  6.9 | - | - | - | - | - | - |  |
| Vigabatrin | 108 | - | 100 | - | - | Mean number of seizures at baseline per month:  6.8 | - | - | - | - | - | - |  |
| Chadwick,  1999 | Carbamazepine | 226 | 100 | - | - | - | - | - | 28 | 40 | 66 | - | - |  |
| Vigabatrin | 220 | 100 | - | - | - | - | - | 34 | 42 | 63 | - | - |  |
| Gobbi,  1999 | Carbamazepine | 40 | - | - | - | - | - | 33 | 50 | 43 | - | 18 | - |  |
| Vigabatrin | 37 | - | - | - | - | - | 46 | 62 | 62 | - | 0 | - |  |
| Steiner,  1999 | Phenytoin | 95 | - | - | 25 | - | - | 27 | 21 | - | - | 52 | - | - |
| Lamotrigine | 86 | - | - | 25 | - | - | 28 | 23 | - | - | 49 | - | - |
| Aldenkamp,  2000 | Vaproic Acid | 29 | - | - | - | - | Median baseline seizure rate per month:  5.8 | - | - | - | - | - | - | - |
| Topiramate | 24 | - | - | - | - | Median baseline seizure rate per month:  5.9 | - | - | - | - | - | - | - |
| Gillham,  2000 | Carbamazepine | 129 | - | - | - | - | - | - | - | - | - | - | - |  |
| Lamotrigine | 131 | - | - | - | - | - | - | - | - | - | - | - |  |
| Biton,  2001 | Valproate | 68 | 35 | - | 26 (13)  N=31 | - | - | 26 |  | 24 |  | 81 |  |  |
| Lamotrigine | 65 | 34 | - | 28 (16)  N=34 | - | - | 28 |  | 26 |  | 77 |  |  |
| Cramer,  2001 | Carbamazepine | 76 | 0 | 100 | - | Mean duration of epilepsy in years:  21 | Mean number of complex partial seizures per month:  15 (30)  n=76 | - | - | 100 | - | - | - |  |
| Tiagabine | 67 | 0 | 100 | - | Mean duration of epilepsy in years:  23 | Mean number of complex partial seizures per month:  29 (82)  n=66 | - | - | 99 | - | - | - |  |
| Phenytoin | 101 | 0 | 100 | - | Mean duration of epilepsy in years:  20 | Mean number of complex partial seizures per month:  22 (66)  N=100 | - | - | 100 | - | - | - |  |
|  | Tiagabine | 105 | 0 | 100 | - | Mean duration of epilepsy in years:  25 | Mean number of complex partial seizures per month:  13 (28)  N=104 | - | - | 100 | - | - | - |  |
| Kwan,  2001 | Carbamazepine | 212 | 100 | - | - | - | - | - | - | - | - | - | - |  |
| Valproic Acid | 101 | 100 | 0 | - | - | - | - | - | - | - | - | - |  |
| Lamotrigine | 78 | 100 | 0 | - | - | - | - | - | - | - | - | - |  |
| Nieto-Barrera,  2001 | Carbamazepine | 201 | 100 | - | - | - | Mean number of seizures at baseline per month:  6.84 | 63 | 16 | 39 | 1 | - | - | - |
| Lamotrigine | 417 | 100 | - | - | - | Mean number of seizures at baseline per month:  10.07 | 55 | 21 | 44 | 1 | - | - | - |
| Sackellares,  2002 | Valproate | 55 | - | - | - | - | - | - | - | - | - | - | - | - |
| Lamotrigine | 53 | - | - | - | - | - | - | - | - | - | - | - | - |
| Biton,  2003 | Valproate | 20 | - | - | 15.5  N=12 | - | - | 0 | - | - | 100 | - | - |  |
| Lamotrigine | 18 | - | - | 14.9  N=14 | - | - | 11 | - | - | 89 | - | - |  |
| Meador,  2003 | Valproate | 29 | - | - | - | - | - |  | - | - | - | - | - |  |
| Topiramate | 34 | - | - | - | - | - |  | - | - | - | - | - |  |
| Privitera,  2003 | Carbamazepine | 126 | - | - | - | - | - | 73 | - | - | 28 | - | - | Unclassified: 1 |
| Valproic Acid | 78 | - | - | - | - | - | 42 | - | - | 63 | - | - | Unclassified: 1 |
| Topiramate 100 mg | 210 | - | - | - | - | - | 64§ | - | - | 38§ | - | - | Unclassified: 3 |
| Topiramate 200 mg | 199 | - | - | - | - | - | 64§ | - | - | 38§ | - | - | Unclassified: 3 |
| Clemens,  2004 | Carbamazepine | 20 | - | - | - | - | - | - | - | - | - | - | - |  |
| Oxcarbazepine | 20 | - | - | - | - | - | - | - | - | - | - | - |  |
| Coppola,  2004 | Valproic Acid | 19 | 100 | 0 | 7.5 | Mean duration of epilepsy in years:  6.9 months | - | - | - | - | - | - | 100 |  |
| Lamotrigine | 19 | 100 | 0 | 7.5 | Mean duration of epilepsy in years:  4.5 months | - | - | - | - | - | - | 100 |  |
| Fakhoury,  2004 | Carbamazepine | 46 | 0 | 100 | - | - | Mean number of seizures during the 2 months prior to screening:  17.7 (50.1) | 30 | 33 | 70 | - | - |  |  |
| Lamotrigine | 98 | 0 | 100 | - | - | Mean number of seizures during the 2 months prior to screening:  14.2 (37.6) | 40 | 26 | 57 | - | - |  |  |
| Valproic Acid | 53 | - | - | - | - | Mean number of seizures during the 2 months prior to screening:  8.3 (14.3) | - | 28 | 72 | 36 | - | - |  |
| Lamotrigine | 105 | - | - | - | - | Mean number of seizures during the 2 months prior to screening:  6.6 (11.0) | - | 33 | 62 | 29 | - | - |  |
| Wheless,  2004 | Carbamazepine | 23 | - | - | - | - | - | 74 | - | - | 22 |  |  | Unclassified: 0 |
| Valproate | 19 | - | - | - | - | - | 32 | - | - | 74 |  |  | Unclassified: 1 |
| Topiramate 100mg/day | 38 | - | - | - | - | - | 57\* | - | - | 38\* | - | - | Unclassified: 10\* |
| Topirate 200mg/day | 39 | - | - | - | - | - | 57 \* | - | - | 38\* | - | - | Unclassified: 10\* |
| Rowan,  2005 | Carbamazepine | 198 | - | - | - | - |  | 4.7 | 13.5 | 42.0 | - | 29.0 | - | Generalized tonic clonic and partial: 10.9  Mixed partial: 4.7 |
| Gabapentin | 195 | - | - | - | - |  | 6.8 | 11.5 | 42.2 | - | 22.4 | - | Generalized tonic clonic and partial: 2  Mixed partial: 6.8 |
| Lamotrigine | 200 | - | - | - | - |  | 4.1 | 14.3 | 45.4 | - | 24.5 | - | Generalized tonic clonic and partial:11.7  Mixed partial: 4.1 |
| Sobaniec,  2005 | Carbamazepine | 28 | - | - | - | - | - | 71 | 4 | 25 | - | - | - |  |
| Vigabratin | 26 | - | - | - | - | - | 88 | 4 | 8 | - | - | - |  |
| Steinhoff,  2005 | Carbamazepine | 88 | 100 | - | - | - | Mean total number of seizures during the last 6 months prior to recruitment:  12.4 (27.3) | - | - | - | - | - | - | - |
| Lamotrigine | 88 | 100 | - | - | - | Mean total number of seizures during the last 6 months prior to recruitment:  12.9 (37.1) | - | - | - | - | - | - | - |
| Valproate | 30 | 100 | - | - | - | Mean total number of seizures during the last 6 months prior to recruitment:  23 (52.5) | - | - | - | - | - | - | - |
| Lamotrigine | 33 | 100 | - | - | - | Mean total number of seizures during the last 6 months prior to recruitment:  16.4 (43.6) | - | - | - | - | - | - | - |
| Babayigit,  2006† | Carbamazepine | 23 | - | - | - | - | - | 42 | - | - | 58 | - | - |  |
| Valproic Acid | 31 | - | - | - | - | - | 42 | - | - | 39 | - | - |  |
| Oxcarbazepine | 14 | - | - | - | - | - | 42 | - | - | 58 | - | - |  |
| Brodie,  2007 | Carbamazepine-Controlled Release | 291 | 100 | - | - | - | - | 79.7 | - | - | - | 20.3 | - |  |
| Levetiracetam | 285 | 100 | - | - | - | - | 80 | - | - | - | 20 | - |  |
| Donati,  2007 | Carbamazepine | 28 | 0 | 100 | - | - | - | 57.1 | 32.1 | 60.7 | - | - | - |  |
| Valproic Acid | 29 | 0 | 100 | - | - | - | 37.9 | 41.4 | 57.1 | - | - | - |  |
| Oxcarbazepine | 55 | 0 | 100 | - | - | - | 56.4 | 41.8 | 41.8 | - | - | - |  |
| Kang,  2007 | Carbamazepine | 54 | - | - | - | Mean time since first seizure in months:  7.9 (9.2) | - | - | - | - | - | - | - | - |
| Topiramate | 58 | - | - | - | Mean time since first seizure in months:  8.4 (11.2) | - | - | - | - | - | - | - | - |
| Kim,  2007 | Carbamazepine | 10 | 100 | 0 | - | - | - | 70 | - | - | 30 | - | - |  |
| Valproic Acid | 15 | 100 | 0 | - | - | - | 33 | - | - | 66 | - | - |  |
| Lamotrigine | 8 | 100 | 0 | - | - | - | 25 | - | - | 75 | - | - |  |
| Levisohn,  2007 | Valproic Acid | 9 | - | - | - | - | - | - | - | - | - | 44 | 22 |  |
| Topiramate | 19 | - | - | - | - | - | - | - | - | - | 63 | 11 |  |
| Marson,  2007  SANAD Arm A | Carbamazepine | 378 | - | - | - | - | - | 1.1 | - | - | 0.8 | - | - |  |
| Gabapentin | 377 | - | - | - | - | - | 1.3 | - | - | 0.8 | - | - |  |
| Lamotrigine | 378 | - | - | - | - | - | 1.6 | - | - | 1.1 | - | - |  |
| Oxcarbazepine | 210 | - | - | - | - | - | 1.4 | - | - | 2.4 | - | - |  |
| Topiramate | 378 | - | - | - | - | - | 1.6 | - | - | 1.9 | - | - |  |
| Marson,  2007  SANAD Arm B | Valproic Acid | 238 | - | - | 18.3 (13.7) | - | - | 0 | - | - | 64.7 | - | - |  |
| Lamotrigine | 239 | - | - | 17.5 (12.1) | - | - | 0.4 | - | - | 60.7 | - | - |  |
| Topiramate | 239 | - | - | 17.6 (11.5) | - | - | 0.8 | - | - | 63.5 | - | - |  |
| Saetre,  2007 | Carbamazepine - Sustained Release | 91 | - | - | - | Mean time elapsed from diagnosis of epilepsy in months:  1.3 (4.2) | - | - | - | - | - | - | - | - |
| Lamotrigine | 93 | - | - | - | Mean time elapsed from diagnosis of epilepsy in months:  1.3 (3.7) | - | - | - | - | - | - | - | - |
| Stephen,  2007 | Valproate | 111 | 100 | - | - | - | - | 52‡ | - | - | - | 21‡ | - | Juvenile myoclonic epilepsy: 0.08 |
| Lamotrigine | 114 | 100 | - | - | - | - | 52‡ | - | - | - | 21‡ | - | Juvenile myoclonic epilepsy: 0.08 |
| Morrell,  2008 | Valproate | 222 | 85 | 15 | Mean age at first seizure:  19.1 (8.2) | 3.8 (5.7) | - | 36 | - | - | 59 | - | - | Both partial and generalized: 2 |
| Lamotrigine | 219 | 80 | 20 | Mean age at first seizure:  18.3 (7.4) | 3.4 (5.3) | - | 38 | - | - | 59 | - | - | Both partial and generalized: 3 |
| Pack,  2008 | Carbamazepine | 41 | - | 100 | - | - | - | - | - | - | - | - | - | - |
| Valproate | 14 | - | 100 | - | - | - | - | - | - | - | - | - | - |
| Phenytoin | 15 | - | 100 | - | - | - | - | - | - | - | - | - | - |
| Lamotrigine | 23 | - | 100 | - | - | - | - | - | - | - | - | - | - |
| Perry,  2008 | Carbamazepine | 20 | - | - | - | - | - | - | - | - | - | - | - | - |
| Levetiracetam | 66 | - | - | - | - | - | - | - | - | - | - | - | - |
| Kim,  2009 | Carbamazepine | 105 | - | - | - | - | - | 43.8 | - | - | 46.7 | - | - |  |
| Topiramate | 41 | - | - | - | - | - | 19.5 | - | - | 70.7 | - | - |  |
| Kwan,  2009 | Valproic Acid | 44 | - | - | - | - | - | 36 | - | - | 64 | - | - |  |
| Lamotrigine | 37 | - | - | - | - | - | 43 | - | - | 58 | - | - |  |
| Glauser,  2010 | Ethosuximide | 155 | 100 | - | - | - | - | - | - | - | - | - | 100 |  |
| Valproic Acid | 147 | 100 | - | - | - | - | - | - | - | - | - | 100 |  |
| Lamotrigine | 149 | 100 | - | - | - | - | - | - | - | - | - | 100 |  |
| Helmstaedter, 2010 | Carbamazepine | 84 | 100 | 0 | 45.8 (19.2) | 2.6 (7.4) | - | - | - | - | - | - | - | - |
| Levetiracetam | 138 | 100 | 0 | 46.1 (20.4) | 1.1 (3.6) | - | - | - | - | - | - | - | - |
| Ramsay,  2010 | Phenytoin | 127 | - | - | 34.0 (16.4) | 1.3 (4.9) | - | - | 11.8 | 22.0 | 48.8 | - | 2.4 | Myoclonic: 0.8 |
| Topiramate | 132 | - | - | 31.3 (15.9) | 1.8 (5.8) | - | - | 6.8 | 28.8 | 38.6 | - | 3.8 | Myoclonic: 2.3 |

\*Values represent percentages of combined Topirmate 100 mg and Topiramte 200 mg groups

†Values represent percentages for all patients combined and not by treatment group

‡Values represent percentages for all patients combined and not by treatment group

§Values represent percentages of combined Topiramate 100 mg and Topiramate 200 mg group

- = not reported; N = sample size; SANAD Arm A = Standard and New Antiepileptic Drugs Trial Arm A; Arm B = Standard and New Antiepileptic Drugs Trial Arm B