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## Introduction



Peter  
Peter had his first epileptic seizure at the age of 14. At no stage were we told that the likelihood of an early death was increased with epilepsy.

Epilepsy is a neglected community health burden. For example, the prevalence of epilepsy is <1%<sup>1,2</sup> compared to asthma (≈10%) but yearly mortality figures show a higher proportion of deaths in epilepsy (epilepsy 284, asthma 421), with the **YPLL for epilepsy (6672) and asthma (3782)**.<sup>3</sup> In neurological disease the YPLL for sudden death in epilepsy is second only to stroke.<sup>4</sup>

QOL measures show increased rates of depression, anxiety, unemployment and stigma accompanying epilepsy.<sup>5</sup>

Among **Indigenous Australians** from July 2004 to June 2006, 'convulsions and epilepsy' was the second most common category of ambulatory sensitive conditions hospitalised, at a rate around 5 times the rate of other Australians. Convulsions and epilepsy were the most common reason for hospitalisation among Aboriginal and Torres Strait Islander peoples aged 15–24 years at twice the rate of other Australians.<sup>6</sup>

## What is the role for general practice?<sup>9</sup>

GPs each have a small number of epilepsy patients. This limits experience and the development of confident management skills. Update training options and resources are inadequate whilst **new terminology, classifications and treatments have appeared**.<sup>9</sup>

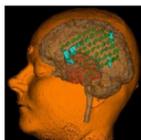
International guidelines suggest that the diagnosis is best made by an epilepsy specialist<sup>7,8,9</sup> where available. In Australia telehealth can facilitate this in regional areas.

Following diagnosis however, primary care support is crucial to positive outcomes. **Epilepsy and its treatment raise many general health issues best-handled in general practice.**

Patient education, encouragement of antiepileptic drug (AED) adherence, monitoring of seizures, AED adverse effects, comorbidities, behavioural changes and social wellbeing are all in the scope of general practice. Individual assessment of risk and support for self-management sit well in a community-based setting with regular, trusted, familiar contacts.<sup>10</sup>

## Treatment goals<sup>7,8,9</sup>

- ❖ Suspected **new onset seizures require rapid assessment**, a precise, early (fast track) diagnosis and initiation of appropriate therapy (preferably by a specialist).<sup>7,8</sup>
- ❖ Classification of seizure types and epilepsy syndromes should always be noted where available, as they have implications for management and prognosis, guiding both GP and patient..
- ❖ Using revised definitions, treatment might be recommended after one seizure where the history, EEG or risk factors suggest likely recurrence.
- ❖ AED treatment is individualised to the seizure type, syndrome, co-medication and co-morbidity, lifestyle, and patient preferences. **The aim is complete seizure control with minimum side effects.**
- ❖ Monitor compliance strongly to ensure that any failure of treatment is clearly understood. Note the latest guidance on blood testing (emphasis is on managing patient, not levels).
- ❖ Have a plan of care and **monitor regularly for seizure control, AED adverse effects, mood disorder and comorbidities such as osteoporosis**. Yearly specialist review, or earlier if problems. Some syndromes may resolve.
- ❖ **Ensure patient is fully informed**, including support services, and revisit key issues with patient over time.
- ❖ **Epilepsy surgery is underutilised and should be considered earlier** in epilepsy patients who are refractory to medical treatment'. (Prof Gavin Fabinyi).<sup>9</sup>



## Epilepsy mortality – Risk Assessment<sup>11</sup>



Epilepsy has an SMR 2-3 times that of the general population. Causes of increased mortality include not only accidents, status epilepticus and suicide, but also Sudden Unexpected Death in Epilepsy (SUDEP) - the **most common cause**..

There is no known cause for SUDEP. Deaths are usually unwitnessed and the key risk factor is frequent tonic-clonic seizures, especially at night. Deaths do also occur however, in people with only rare seizures. SUDEP affects approx. 1 per 1000 people with epilepsy and 1 per 100 where seizures are frequent.

In UK general practice, four red flags for risk of death in epilepsy have been identified:<sup>12</sup>

- ❖ not collecting medications
- ❖ alcohol problems
- ❖ an injury in the last 12 months
- ❖ having had treatment for depression.

**Risk communication** and individual risk assessment should be an integral part of patient and family support in general practice. Resources and evidence-based checklists have been developed in the UK to guide risk discussions.<sup>13</sup>



Jane  
I am lying on her bed thinking of what we could have done to prevent her death. She was 19 years old..

## Epilepsy in Later Life<sup>9,14</sup>

Epilepsy is most likely to develop in later life. The incidence rises from 85.9 per 100 000 people (age 65-69) to 135+ per 100 000 (age 80+) compared to 80.0 per 100 000 (all age groups).

The causes of epilepsy, clinical manifestations of seizures and impact of the condition differ from younger people and making a diagnosis can be difficult. Late-onset seizures are a predictor of subsequent stroke.

**Pay particular attention to pharmacokinetic and pharmacodynamic issues with polypharmacy and comorbidity.**

## Mood Disorders<sup>9</sup>

People with epilepsy are more likely to experience mood disorders. AEDs and psychological factors contribute but there is also a recognised bidirectional relationship between depression and epilepsy. People with epilepsy are more likely to have a history of depression than others.

**Regular screening of mood is essential.** Where depression or behavioural changes are identified, it is important to review current medication to ensure the AED in use is the most appropriate for the individual at that time.

Use of antidepressant drugs is considered safe at therapeutic doses (SSRIs as first line).

## GP Care Plans<sup>9</sup>

Epilepsy fits the Australian Medicare criteria for chronic disease management (CDM). CDM item numbers for GP plans, reviews, allied health participation, and nurse monitoring (item 10997) offer financial support to underpin enhanced support for patients with epilepsy. **An epilepsy GP template is available from eGP** Patients with adverse AED effects or **comorbidities (such as osteoporosis, or weight gain)** may benefit from Allied Health support team care plans. (item 723).

The creation of a plan ensures that all epilepsy information is collected into one document to **ensure continuity of care** if patients see different doctors within a clinic.

**For general practice focussed training sessions (free), regional nurse & epilepsy educator training - check eGP.**

## Women with epilepsy<sup>7,8,9</sup>

Give information about contraception, conception & pregnancy to women and girls in advance of sexual activity. Pregnancy must be planned. Offer 5mg/day of folic acid before possibility of pregnancy.

**Select contraception carefully, informing women about relationships between contraception and AEDs.** With hepatic enzyme-inducing AEDs the progesterone implant is not effective: the progesterone intrauterine system is recommended.(Link to checklist).<sup>9</sup>

Seizures during pregnancy carry risks for mother and baby. However, AED's have various teratogenic effects. **Be aware of the latest advice and contraindications.** For example, despite negative publicity in the case of Valproate the Epilepsy Society of Australia has stated that '...Valproate still has a place in women with epilepsy'. Guidance is available through International guidelines<sup>8</sup> and the work of the Australian Pregnancy Register.

## Australian Pregnancy Register for Women on Antiepileptic Medication (APR)

The APR is a voluntary nationwide study for women who are currently pregnant or who have given birth recently if they are:

- ❖ women with epilepsy taking AEDs
- ❖ women with epilepsy not taking AEDs.
- ❖ women taking AEDs for allied conditions.

FAX (03) 9342 2577 TEL 1800 069 722 [www.apr.org](http://www.apr.org)

## References and Resources

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eGP website: an epilepsy resource for general practice

For expanded poster content and reference links please visit eGP.

eGP  
epilepsy in general practice

## POSTER REFERENCES

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The eGP web page has a list of topics under the resources tab found on the home page. You will find material on definitions and classification under the epilepsy overview tab. There are also tabs for women, epilepsy in later life, mood, GP Care Plans, Risk, Diagnosis and Management where links will take you to a wide range of information.
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