

# Pharmacist Prevents Wipe-out for a Patient on Perampanel

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## MEET THE PATIENT – 18 year old Brandon

Admitted to hospital following three seizures with subsequent fall causing diffuse pain in the spine, shoulder and head. He was transferred to ICU after further seizures on the general medical ward. Past medical history included epilepsy, depression, anxiety and sleep disorders – all diagnosed in 2016.

### Medications on Admission:

Colecalciferol 25microg each morning  
(unknown indication)

Clonidine 100microg at night  
(Sleep disorder)

Duloxetine 60mg at night  
(Depression)

Lamotrigine 200mg twice daily  
(Epilepsy)

Sodium valproate EC 1g twice daily  
(Epilepsy)

### WHAT HAPPENED SO FAR?

Prior to pharmacist review in ICU lamotrigine was increased to 225mg twice daily, and **perampanel 2mg daily**.

*It was commenced after neurologist consultation. The initiation dose was right. So what is the problem?*

***Perampanel does have serious side effects***

### WHAT IS THE CONCERN?

Limited detail about perampanel in the Australian Medicines Handbook led to investigation of primary sources. With psychiatric and aggressive behaviour listed as a “**Black Box Warning**” in US the pharmacist was concerned for this patient’s mental health (i.e. current medical history of depression).

***During the interview, the pharmacist discovered the patient was voicing suicidal ideation during this admission.***



## WHAT DOES THIS MEAN FOR PHARMACY PRACTICE?

**The individual patient’s characteristics must be considered when determining the appropriateness of a drug.**

**The likelihood and impact of all reported side effects must be assessed for each patient.**

**Serious adverse effects, even those with low incident rates, can have serious consequences on the safety of individual patients.**

## WHAT DID THAT MEAN FOR BRANDON?

Common side effects: Abnormal gait (1% to 16%), Ataxia (1% to 8%), Dizziness (16% to 43%), Headache (11% to 13%), Loss of equilibrium (3% to 5%), Somnolence (9% to 18%), Fatigue (8% to 15%).

***“BRANDON IS AN ELECTRICIAN, WORKING ON ROOFS – DIZZINESS AND INCREASED RISK OF FALLS NOT SAFE. HE IS FATIGUED FROM OTHER MEDICATIONS, ALREADY LIMITING HIS ABILITY TO WORK”***

Psychiatric: Irritability (4% to 12%), Mood disorder (up to 2%), Anger (3%)

***“BRANDON HAS DIAGNOSIS OF MAJOR DEPRESSION, AND IS EXPRESSING SUICIDAL IDEATION DURING ADMISSION”***

Clinical trials (n=4368) report more serious and life-threatening psychiatric outcomes include aggression (1-3%), homicidal thoughts (0.1%), and suicidal thoughts (0.43%). Suicidal thoughts can begin as early as 1 week after commencement, potentially lasting for at least 24 weeks.

## WHAT WOULD YOU RECOMMEND?

Following analysis of literature reported serious adverse reaction rates, the pharmacist recommended that perampanel was **too high a risk** in this patient in light of the seriousness of his escalating mental health status. The discussion with the intensivist and subsequently the neurologist highlighted that the doctors were unfamiliar with the drug profile and the appropriateness of use in this patient. Perampanel was ceased with careful lamotrigine dose up-titration planned.

