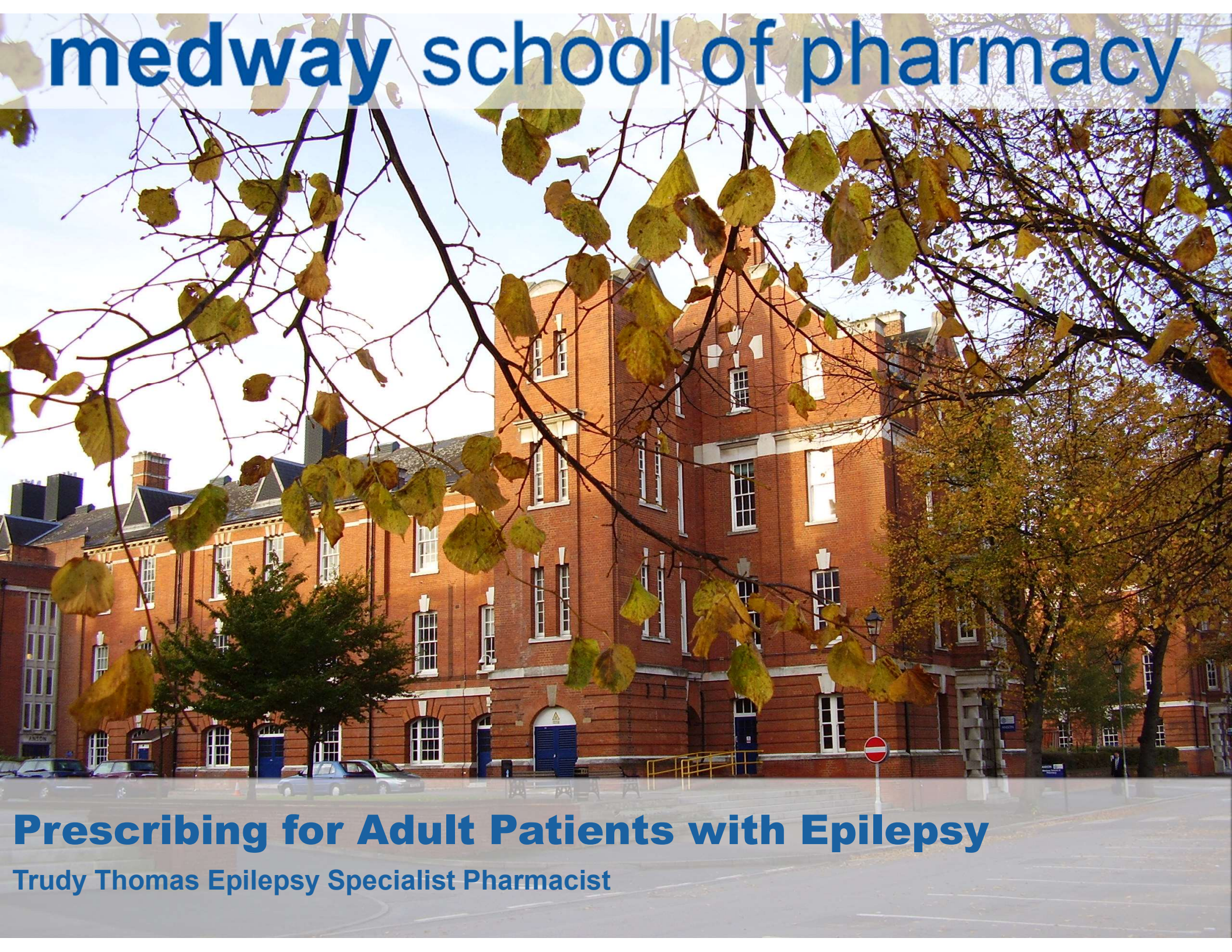

Prescribing for Adult Patients with Epilepsy

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- **Director of Taught Postgraduate studies**
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- **Deputy Head of School**
- **Researcher**

The approach and focus of this session

For non-specialist prescribers who are managing patients who also have epilepsy ('prescribing on a canvas of epilepsy')

- Reminder of some key points about epilepsy, including the impact that epilepsy has on a person's life
- Why prescribing on a background of epilepsy is challenging
- Adherence issues
- Interactions of note with anti-seizure medications
- Some top tips for prescribing for this group of patients

Epilepsy – key points

- 600,000 people in the UK have epilepsy
- Causes seizures and other symptoms including cognitive issues
- Higher prevalence of epilepsy in people with LD ~18% of patients with LD have epilepsy
- 20% of PwE have LD
- Huge impact on the person's life
- People with epilepsy (PwE) have a risk of dying prematurely that is 2–3 x higher than general population
- 800-1000 people die from epilepsy (SUDEP) every year
- https://www.epilepsy.org.uk/info/sudep-sudden-unexpected-death-in-epilepsy

Seizures – key points

- Seizures are either focal aware or focal unaware (70%)
- Generalised: tonic-clonic, atonic, tonic (prolonged loss of consciousness)
- Absence, myoclonic (brief loss of consciousness)
- Some focal seizures will evolve to a TCS

- Misdiagnosis is common (20-30%)

https://www.epilepsysociety.org.uk/seizure-types

Anti-Seizure Medicines (ASMs)

- Vast majority of PwE will be taking one or more ASMs
- NICE guidance just updated (April 2022)
- Overview | Epilepsies in children, young people and adults | Guidance | NICE
- Changes in 1st and 2nd line drugs since last guidance
- Most commonly used ASMs are:
- Lamotrigine, levetiracetam, sodium valproate, carbamazepine
- As rescue: buccal midazolam, clobazam
- TDM is not usually required

https://epilepsysociety.org.uk/what-we-do/medical-services/therapeutic-drug-monitoring/monitoring-drug-concentrations

Co-morbidity

Somatic and psychiatric comorbidity high

- Higher incidence of other psychiatric conditions eg depression (2/3rds PwE have depression at some point), anxiety, dementia, stroke, migraine, Parkinson's
- Up to 50% report a memory problem
- Type 1 diabetes, IHD, hypertension, GI conditions (IBD, ulcers, GI bleeds), sleep apnoea, chronic bronchitis, pneumonia, arthritis
- Falls and injuries high
- 4x more likely to go into hospital
- Premature mortality is persistently high despite being seizure free
- We should be asking: 'Epilepsy and what else?'

The challenge of the epilepsy canvas

- People with seizures are seen (and managed by) a range of specialities, neurology, LD services, stroke, paeds, geriatrics, substance misuse, obstetrics, neuropsychiatry
- ‘Neurophobia’ in health care professionals
- Possible sub-optimal care for co-morbidities because of concerns about disrupting seizures control and/or interactions with ASMs
- Teratogenicity – not just valproate
- Adherence is poor (~40%)

Adherence

- Side effects are frequent and can be horrible: drowsiness, dizziness, insomnia, behavioural issues, weight gain or loss, worsening seizures, sexual dysfunction, blood dyscrasias
- Polypharmacy (esp multiple ASMs)
- People ‘adapt’ their regimen which can worsen seizure control
- Memory issues/cognition
- Post ictal somnolence/confusion
- Differences in bioavailability between generics and brands

Drug Interactions

- Can be pharmacokinetic (PK)
- Where one drug interferes with the absorption, distribution, metabolism or excretion of the other
- Shared metabolic pathways are an issue
- Drugs metabolised using the CYP450 enzyme systems
- Esp where the ASM or the other drug is an enzyme inducer or enzyme inhibitor

ASM Enzyme Inducers

Carbamazepine and its relatives (oxcarbazepine, eslicarbazepine)

Perampanel (>12mg daily)

Topiramate (>200mg daily)

Phenytoin

Phenobarbital

Primidone

PK interactions - other ASMs to worry about

Sodium valproate (inhibitor)

Lamotrigine (not metabolised by CYP450 but conjugated by UGT enzymes)

Interaction of significance – the COC

ASM	Interaction with oestrogen	Interaction with progestogen	Comments
Carbamazepine and other inducers	Yes Decreases level of pill	Yes Decreases level of pill	Risk of pregnancy
Sodium valproate	No	No	
Lamotrigine	Yes Decreases level of lamotrigine	?may lower progestogen level but no evidence of reduced efficacy	Risk of break through seizures

Pharmacodynamic Interactions

This is where one drug causes similar (additive effects)

Eg ASM and Drug B both cause drowsiness

OR

One drug causes antagonistic effects

Eg ASM raises seizure threshold, Drug B lowers seizure threshold eg stimulants, antimalarials, ciprofloxacin, tramadol, clozapine.

Red flags in epilepsy

Seizures: Ongoing seizures, worsening seizures? Prolonged seizures (~5 mins) Changing seizures, other significant/worsening cognitive issues: memory, sleep, depression

Ongoing care: Not under secondary care? Too long since/until next appt

Meds: Poor adherence? Significant side effects?

Female? Inadequate contraception, Pregnant (planning)

Monitoring: are blood test deranged?, is Rx for Vit D required (enzyme inducers and valproate)?

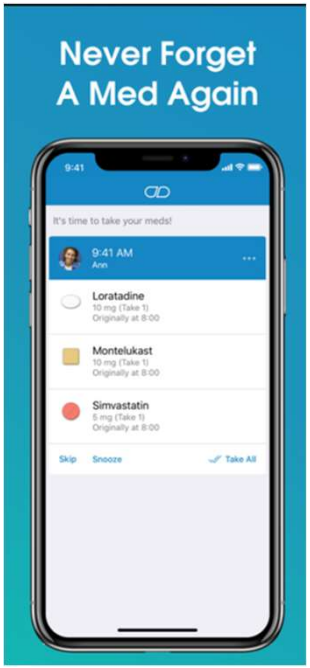
Driving: Ongoing seizures

Trudy's Top 10-Tips – part 1

1. Ask properly about seizure control
2. Ask about the other symptoms: mood, depression, sleep, memory
3. Have a lower threshold for treatment/referral
4. Check for red flags
5. Check for current ASM side effects
6. Consider PD interactions

Top 10-Tips – part 2

7. Use the charity websites
   www.epilepsysociety.org.uk
   www.epilepsy.org
8. For contraception use
   https://www.epilepsy.org.uk/info/daily-life/sex/contraception
9. Consider alarms and reminders to help adherence
10. Engage with people with epilepsy – what you do every day *will* help them



Thanks for listening

Any questions?