Introduction
Hello and welcome to the third issue of the Patient Safety newsletter, produced by the Patient Safety sub-group. As many of you will now be aware, the sub-group is one of four sub-groups reporting into our Controlled Drugs (CD) National Group which was set up as part of the strengthened governance arrangements following the Shipman Inquiry. The National CD Group meets quarterly and comprises representatives from those regulators and agencies with a CD remit. The sub-group feeds into that group and is made up of members from the regulators, the NHS England Patient Safety Team, CD Accountable Officers, hospital and community pharmacists and we invite other healthcare professionals and organisations as and when required. We hope that by working together, we can shine a spotlight on risks and harms to patients from CDs, share learning from real incidents and signpost you to useful guidance. The link to our second issue can be found in the left hand column.

About the newsletter
In this issue we focus on risks of drug-drug interactions, drug doses in renal impairment and the safer use of naloxone and share an extract from NHS England’s South West Region’s CD newsletter article on prescribing opioids for chronic pain. We hope you find the newsletter informative and we welcome your input and feedback. Please also share the newsletters with your Medication Safety Officers (MSOs) colleagues to raise awareness. Links to guidance can be found in the column on the left.

Safety Steps - Risk of Drug-Drug Interactions (DDIs)
A patient with lung cancer, using a 50microgram/hour fentanyl patch was seen by a GP for a suspected chest infection. In line with current guidelines, the patient was prescribed clarithromycin 500mg BD. Within 24 hours the patient was admitted to hospital due to increased shortness of breath attributed to the underlying chest infection. Two days after admission, the patient became excessively drowsy and delirious; a respiratory rate of 6bpm was observed. Following review by the clinical pharmacist, a drug-drug interaction between fentanyl and clarithromycin was identified as the cause of the patient’s deterioration. The patch was removed, naloxone was given, use of clarithromycin was reviewed and the patient was closely monitored for the following 24 hours.

In this instance, a serious drug interaction had occurred, involving fentanyl and clarithromycin. Fentanyl is metabolised by the cytochrome P450 system, specifically CYP3A4. Concomitant use of the CYP3A4 inhibitor, clarithromycin, resulted in excessive sedation and respiratory depression.

Key points:
- While it is possible to predict the likelihood of a drug interaction, it
is often difficult to predict the clinical relevance.

- Concomitant use of drugs that are metabolised by and/or affect the activity of the same cytochrome P450 isoenzyme may lead to clinically relevant drug interactions.
- If in any doubt, ask a pharmacist.

### Adjusting drug doses in renal impairment

Many drugs are excreted from the body through the kidneys. If patients have impaired renal function, renally excreted drugs can accumulate within their organs and tissues and lead to drug toxicity, unless doses are appropriately reduced. For example, a recent incident involved a patient who received full dose intravenous aciclovir, despite poor renal function. They suffered neurological symptoms resulting in an escalation in care.

#### Practice points:

- Review drug doses for all patients with impaired renal function, both acute and chronic.
- Calculated creatinine clearance (CrCl), based on ideal body weight when obese, and should be used to assess renal function and not eGFR.
- Resources for dose adjustment in renal impairment: the ward pharmacist (or on call pharmacist out of hours), the BNF, the Summary of Product Characteristics (SPC) via the electronic Medicines Compendium (emc)

### Safer use of Naloxone


#### Reminders:

- Emergency use of naloxone is considered in opioid-induced respiratory depression (less than 8 breaths per minute) or immediate threat to life related to opioid use.
- A UKMI document gives guidance on risks and advises on administration and monitoring in different clinical situations.
- In patients on long term opioids there is a risk of an acute withdrawal syndrome and rebound pain.

#### Further information:

On the left hand column we have included a link to the Government’s published guidance to support the widening of the availability of naloxone.

### Prescribing Opioids for Chronic Pain

NHS England’s South West Regional Team have produced a regional wide newsletter that suggests whilst opioids are effective analgesics for acute pain and end of life care, they are of limited use for long term pain. Side effects are very common and up to a quarter of patients taking opioids long term have developed a dependence on them. Further information can be found in the South West Regional Team’s newsletter: