**Safety Briefing**  
**Methotrexate** – once weekly dose prescribed & administered daily in error

**Summary of incidents**  
Staff have reported several adverse clinical incidents (ACI) on the DATIX system where near misses have occurred associated with the prescribing and administration of methotrexate. Methotrexate should be prescribed and administered **weekly** for non-oncology indications (e.g. to treat rheumatoid arthritis, Crohn’s disease or psoriasis). Over recent years we have had -

- Outpatient prescriptions presented to pharmacy for daily methotrexate
- A discharge prescription received in the dispensary for methotrexate 7.5mg three times daily!
- A weekly 7.5mg dose was prescribed as 75mg weekly,
- Several cases reported where weekly doses were prescribed daily.
- A Fax from a GP surgery stated: methotrexate 2.5mg tablets 10mg (four tablets) to be taken weekly, the resulting inpatient prescription was mistakenly written as 40mg weekly.

All of which were corrected by a Pharmacist before the required medication was dispensed.

Recently however, an inpatient received 25mg methotrexate on 2 consecutive days as it was prescribed daily, and they had bought in their **own supply**. Thankfully additional blood tests to check full blood count, urea, electrolytes and liver function tests were requested and the patient was unharmed. Such an error involving methotrexate, is classified as a “**Never Event**”. Never events are serious, largely preventable patient safety incidents that should not occur if the available preventative measures have been implemented. They can cause serious harm or death to a patient and also result in financial penalties to the Trust. A full list of the 10 medicine related Never Events is listed over the page.

**What have we learnt from these incidents and subsequent investigations**

- Staff were not aware that the methotrexate should be prescribed and administered on a weekly basis, for non-oncology indications.
- Some staff were apparently not aware that administering methotrexate daily can be fatal. Death has been reported following ingestion of six consecutive daily doses that were intended weekly, and harm can occur with even few consecutive doses.
- The patient was aware that he was administered a second weekly dose on the following day, a further 10 tablets in one go. However he did not question this, as he assumed this would be correct – as he was being treated by healthcare professionals after all. This displays the unquestionable trust that some patients can place upon us.

**Some of the actions taken to date**

- Inclusion of methotrexate prescribing in the e-learning for medical and nursing staff.
- Production of an information booklet for patients so they are aware it is a weekly drug.
- In Gloucestershire, both the Trust and GPs give oral non-oncology doses in multiples of 2.5mg tablets to minimise confusion with the 10mg tablets.
- For inpatients pharmacy only supplies enough 2.5mg tablets for one weekly dose at a time (outside of Oncology). (However if patients bring in their own medication this safeguard may be missed.)
- POPAM, the *Policy for the Ordering, Prescribing and Administration of Medicines*, states in the “Guide to the standard Trust prescription chart” that where a medicine is prescribed at unusual intervals, such as weekly, the prescriber must state this in the direction panel. They must also cross through the
Further advice can be sought from your pharmacist or Medicine Information (CGH 3030 / GRH 6108)

Author – Medicine Information GRH

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<table>
<thead>
<tr>
<th>Never Event Description</th>
<th>How to record this incident within DATIX</th>
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| 1. Wrongly prepared high-risk injectable medication | Category – medication  
Sub category – wrong preparation |
| 2. Maladministration of a potassium-containing solution | Category – medication  
Include potassium in description and as name of drug |
| 3. Wrong route administration of chemotherapy | Category – medication  
Sub category – wrong route |
| 4. Wrong route administration of oral/enteral treatment | Category – medication  
Sub category – wrong route |
| 5. Intravenous administration of epidural medication | Category – medication  
Sub category – wrong route |
| 6. Maladministration of Insulin | Category – medication  
Include insulin in description and as name of drug |
| 7. Overdose of midazolam during conscious sedation | Category – medication  
Include midazolam in description and as name of drug |
| 8. Opioid overdose of an opioid-naïve patient | Category – medication  
Sub category – opioid reaction requiring naloxone |
| 9. Inappropriate administration of daily oral methotrexate | Category – medication  
Include methotrexate in description and as name of drug |
| 10. Wrong gas administered | Category – medication  
Sub category – wrong drug, include name of gas in description |

If such event occurs, please inform a Doctor or Pharmacist immediately, so that the patient received an urgent review and document this within DATIX using the descriptions above.