

Smoking Cessation and Medicines Safety Concerns – November 2015

After March 9th 2016 Tees, Esk and Wear Valley NHS Foundation Trust will be a Smoke Free Trust. There is a need to remind healthcare staff on the effect of smoking cessation attempts and psychotropic drug interactions.

Many commonly used medicines are metabolised by hepatic enzymes CYP1A2 e.g. **theophylline, fluvoxamine, caffeine, coumarins including warfarin, and the antipsychotics: clozapine and olanzapine**

Polycyclic aromatic hydrocarbons in tobacco (and to a lesser extent cannabis) smoke causes induction of these enzymes, hence smokers taking a medication that is metabolised by this enzyme may require higher doses than non-smokers. When people stop or reduce their smoking, there can be a decrease in enzyme activity, with a corresponding increase in drug levels: hence they may require a reduction in the dosage of the interacting medication. Conversely, if non-smokers restart smoking, a dose increase should be anticipated to maintain therapeutic levels.

Advice for health professions was issued in the [Medicines and Healthcare Regulatory Agency \(MHRA Drug Safety Update \(Volume 3 issue 3 October 2009\)\)](#)

Not all possible drug-smoking interactions are clinically significant. Important factors that determine the clinical significance of an interaction in smokers are:

- The extent to which the medicine is metabolised by the enzyme CYP1A2
- The therapeutic index of the medicine metabolised (where there is little difference between therapeutic and toxic doses). For example higher plasma levels of clozapine may have significant clinical adverse effects

Revised TEWV guidance is available on the [TEWV website](#).

For people taking clozapine who are intending to stop smoking, advice should be sought from the clozapine clinic staff or consultant psychiatrist who will formulate a plan, to ensure the patient's ongoing safety. More information is available from Medicines Information 0191 441 5778 or tewv.medicinesinformation@nhs.net

For patients stopping smoking:

- Find out all the medicines the patient is taking
- Determine clinical significance of any potential interaction
- Monitor for side effects
- Adjust dose as necessary