



Pharmacy in Scotland: Best Practice case study

Implementing pharmacogenomics in the stroke service

The NHS Tayside stroke service is using pharmacogenomics to deliver person-centred, and more effective, care to patients.

Clopidogrel is recommended for treatment in UK clinical guidelines following an (non-cardioembolic) ischaemic stroke. It stops platelets sticking to each other so reduces the risk of blood clots. It only works if it is metabolised by the body into an active drug that has a clinical effect.



The patient receives personalised medicine and therefore more effective care

When a patient is admitted to the stroke ward, an investigation and assessment is carried out. The clinical pharmacist on the stroke ward orders a genomic test for enzyme CYP2C19 (which is the most important enzyme to support metabolism of Clopidogrel).

The pharmacist then reviews the result. If the patient's clopidogrel metabolism is not impaired then treatment is continued as normal. If impaired, the pharmacist reviews the patient and typically switches the patient to an alternative antiplatelet treatment lowering their risk of having a further stroke.

The pharmacist will explain the result and subsequent treatment to the patient and provide information to the patient's GP for ongoing prescribing.

The result is that the patient receives personalised medicine and therefore more effective care.



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