

Monitoring Drug Therapy

The aim of this document is to provide information on the monitoring requirements for drugs that have common adverse drug reactions leading to hospitalisation. This document has been produced following an audit conducted by ASPH NHS Foundation Trust which found 8% of hospital admissions reviewed were linked to adverse drug reactions, with the majority of the cases identified being linked to the drugs below.

Drug	Monitoring	Additional information
Angiotensin-converting enzyme inhibitors (ACEI) and angiotensin-II receptor antagonists NOTE: dual therapy is not routinely recommended and should only occur under specialist supervision	Baseline: <ul style="list-style-type: none"> BP, U&Es and eGFR Routine: <ul style="list-style-type: none"> BP, U&Es within 2 weeks of initiation or significant dose change and on an annual basis. Monitor more frequently in patients on diuretics and with renal impairment or unstable heart failure 	Consider modifying / stopping treatment if: <ul style="list-style-type: none"> eGFR falls by 25% or more or serum creatinine increases by 30% or more from baseline after commencing or dose increase. If the changes indicating a decrease in renal function are less than described do not modify the dose but repeat the test in 1-2 weeks. serum potassium is 5.5 mmol/l or more serum sodium is < 132 mmol/l
Diuretics (loop and thiazide)	Baseline: <ul style="list-style-type: none"> U&Es (for thiazides blood glucose) Routine: <ul style="list-style-type: none"> U&Es 1 month after starting, and then 1-2 weeks after a change of dose or clinical circumstances U&Es should be performed annually Thiazides: blood glucose should be performed annually 	<ul style="list-style-type: none"> If serum potassium falls below 3.0mmol/l it may be necessary to add a potassium-sparing diuretic. Thiazides may induce diabetes mellitus Renal function should be re-measured within 2 weeks if serum creatinine rises by >20% or eGFR falls by 15%
Digoxin	Baseline: <ul style="list-style-type: none"> U&Es and eGFR (particular attention to potassium level) Routine: <ul style="list-style-type: none"> Annual U&Es 	<ul style="list-style-type: none"> Serum creatinine provides an estimate of renal function. Hypokalaemia may predispose the patient to digoxin toxicity. Regular monitoring of digoxin concentration is not necessary unless toxicity is suspected.
NSAIDs – daily use	Baseline: <ul style="list-style-type: none"> <i>Risk factors for GI bleed:</i> haemoglobin or haematocrit <i>Risk factors for developing renal insufficiency:</i> creatinine Routine: <ul style="list-style-type: none"> <i>For patients with heart failure:</i> U&Es 1–2 weeks after starting or increasing NSAID dose and annually thereafter <i>For patients with hypertension:</i> Monitor BP 2–4 weeks after starting or increasing dose and annually thereafter <i>For patients with / at risk of renal impairment:</i> U&Es 1–2 weeks after starting or increasing NSAID and then at least annually <i>Risk factor for GI bleed:</i> annual haemoglobin or haematocrit 	<ul style="list-style-type: none"> NSAIDs should always be used at the lowest effective dose and for the shortest period of time to control symptoms and the need for long-term treatment should be reviewed periodically Asthma: any degree of worsening of asthma may be related to the ingestion of NSAIDs, either prescribed or purchased over the counter Review risks vs benefits in light of any changes in patient's baseline parameters