Professional Certificate in Medication Management (United Kingdom)

Adverse Drug Reactions

Adverse Drug Reaction (ADR)
Related terms: side effect, drug toxicity, pharmacovigilance
An ADR is any noxious, unintended response to a medicinal product occurring at normal doses. It includes predictable effects (type A) and unpredictable effects (type B). Example: A patient develops a rash after starting amoxicillin. In practice, clinicians must identify, document, and report ADRs to improve patient safety. Challenges involve distinguishing ADRs from disease symptoms and managing under-reporting.

Allergic Reaction
Related terms: hypersensitivity, IgE-mediated response, anaphylaxis
An immune-mediated response to a drug, often rapid and potentially severe. Example: Urticaria after penicillin administration. Practical application requires immediate cessation of the offending drug and appropriate antihistamine therapy. The challenge lies in recognizing early signs and differentiating true allergy from non-immune adverse effects.

Anaphylaxis
Related terms: systemic allergic reaction, epinephrine, emergency management
A life-threatening, rapid onset systemic reaction characterized by airway compromise, hypotension, and skin manifestations. Example: Sudden bronchospasm after a contrast agent injection. In medication management, rapid epinephrine administration and emergency protocols are essential. Challenges include timely identification and ensuring patients carry emergency kits.

Anticholinergic Toxicity
Related terms: dry mouth, urinary retention, cognitive impairment
Excessive blockade of acetylcholine receptors leading to peripheral and central effects, often seen with drugs like diphenhydramine. Example: Confusion and blurred vision in an elderly patient on multiple anticholinergic agents. Practitioners must assess cumulative anticholinergic burden. Challenges involve polypharmacy and age-related susceptibility.

Beta-Blocker Withdrawal
Related terms: rebound tachycardia, hypertension, abrupt cessation
A rebound phenomenon occurring when beta-blockers are stopped suddenly, leading to increased heart rate and blood pressure. Example: Patient experiences chest pain after stopping propranolol without tapering. Practical guidance includes gradual dose reduction. Challenges are patient adherence and lack of awareness of withdrawal risks.

Black Box Warning
Related terms: FDA safety alert, serious risk, labeling
The most stringent warning required on a drug label, indicating a significant risk of serious or life-threatening adverse effects. Example: Antidepressants carry a black box warning for increased suicidal

ideation in young adults. Clinicians must counsel patients and monitor closely. Challenges involve balancing therapeutic benefits against highlighted risks.

Cardiotoxicity
Related terms: heart failure, QT prolongation, anthracyclines
Drug-induced damage to the myocardium or conduction system, potentially leading to arrhythmias or reduced ejection fraction. Example: Reduced left ventricular function after cumulative doxorubicin dosing. Monitoring includes ECGs and echocardiography. Challenges include dose limitations and early detection.

Clinical Decision Support (CDS)
Related terms: electronic prescribing, alerts, drug interaction checker
Software tools integrated into electronic health records that provide evidence-based prompts to prevent medication errors. Example: An alert flags a potential interaction between warfarin and fluconazole. Practical use improves safety but may lead to alert fatigue. Challenges involve optimizing specificity and user acceptance.

Contraindication
Related terms: absolute contraindication, relative contraindication, precaution
A specific situation where a drug should not be used because the risk outweighs any therapeutic benefit. Example: Pregnancy is an absolute contraindication for isotretinoin. Clinicians must review patient histories before prescribing. Challenges include incomplete documentation and evolving evidence.

Cross-Reactivity
Related terms: structural similarity, allergy, beta-lactams
When an immune response to one drug triggers a reaction to another chemically related drug. Example: A patient allergic to amoxicillin may react to cephalexin. Practical implications require careful selection of alternatives. Challenges arise from limited data on cross-reactivity rates.

Cytokine Release Syndrome
Related terms: immune activation, CAR-T therapy, systemic inflammation
A severe, systemic inflammatory response triggered by certain biologic agents, characterized by fever, hypotension, and organ dysfunction. Example: Cytokine release after administration of rituximab. Management includes corticosteroids and supportive care. Challenges involve early recognition and distinguishing from infection.

Delirium
Related terms: acute confusional state, anticholinergic burden, benzodiazepines
A rapid change in cognition and attention, often precipitated by medication, especially in older adults. Example: Haloperidol-induced delirium in a hospitalised patient. Prevention includes minimising high-risk drugs. Challenges are multifactorial etiology and under-recognition.

Drug–Drug Interaction (DDI)
Related terms: pharmacokinetic interaction, pharmacodynamic interaction, CYP450
A situation where the effect of one drug is altered by the presence of another, potentially leading to toxicity

or therapeutic failure. Example: Increased warfarin INR when combined with azole antifungals. Practical steps involve reviewing medication lists and using interaction checkers. Challenges include complex polypharmacy and variable patient metabolism.

Drug–Food Interaction
Related terms: grapefruit juice effect, absorption, metabolism
An interaction where food components modify drug absorption or metabolism, altering efficacy or safety. Example: Reduced effectiveness of levothyroxine when taken with soy products. Clinicians advise timing of administration relative to meals. Challenges include patient adherence and diverse dietary habits.

Drug-Induced Liver Injury (DILI)
Related terms: hepatotoxicity, ALT elevation, acetaminophen toxicity
Liver damage caused by a medication, ranging from mild enzyme elevation to fulminant failure. Example: Acute hepatitis after high-dose paracetamol ingestion. Monitoring liver function tests is essential for high-risk drugs. Challenges include delayed onset and difficulty attributing causality.

Drug Overdose
Related terms: toxicity, acute poisoning, antidote
Ingestion of a medication in amounts exceeding therapeutic levels, leading to toxic effects. Example: Opioid overdose presenting with respiratory depression. Immediate management includes naloxone administration and supportive care. Challenges involve rapid identification and access to specific antidotes.

Drug Withdrawal Syndrome
Related terms: dependence, tapering, rebound effect
A set of symptoms occurring after abrupt cessation of a medication that the body has adapted to. Example: Tremor and agitation after sudden cessation of benzodiazepines. Clinical practice recommends gradual dose reduction. Challenges include patient reluctance and lack of clear tapering protocols.

Elderly Pharmacokinetics
Related terms: reduced renal clearance, altered volume of distribution, geriatric dosing
Age-related changes that affect drug absorption, distribution, metabolism, and excretion, increasing ADR risk. Example: Prolonged half-life of digoxin in an 80-year-old due to decreased renal function. Dose adjustments and regular monitoring are required. Challenges involve variability among older adults and polypharmacy.

Electrolyte Imbalance
Related terms: hypokalaemia, hypernatremia, diuretic-induced
Abnormal serum concentrations of ions caused by medication effects, potentially leading to cardiac or neuromuscular complications. Example: Thiazide diuretics precipitating hypokalaemia. Monitoring electrolyte panels and patient education are key. Challenges include silent presentations and competing comorbidities.

Enzyme Induction
Related terms: CYP450 induction, increased metabolism, reduced drug levels

The process by which a drug increases the activity of metabolic enzymes, accelerating clearance of co-administered drugs. Example: Rifampicin inducing CYP3A4, lowering oral contraceptive effectiveness. Clinicians must adjust dosages or select alternatives. Challenges involve variable induction magnitude and patient adherence.

Enzyme Inhibition
Related terms: CYP450 inhibition, increased plasma concentration, drug interaction
When a drug reduces the activity of metabolic enzymes, leading to higher levels of other medications. Example: Fluoxetine inhibiting CYP2D6, raising nortriptyline concentrations. Dose reduction or monitoring is required. Challenges include polypharmacy and genetic variability.

Extrapyramidal Symptoms (EPS)
Related terms: tardive dyskinesia, akathisia, dopamine antagonism
Movement disorders caused by drugs that block dopamine receptors, especially antipsychotics. Example: Patient develops facial grimacing after haloperidol initiation. Management includes dose reduction, switching agents, or anticholinergic medication. Challenges are patient distress and long-term neurological impact.

FAERS (FDA Adverse Event Reporting System)
Related terms: spontaneous reporting, pharmacovigilance database, signal detection
A national database that collects reports of adverse events and medication errors submitted to the FDA. Example: Identification of increased liver injury reports with a new antihistamine. Healthcare professionals contribute data to enhance drug safety. Challenges include under-reporting and data quality.

First-Pass Metabolism
Related terms: hepatic extraction, oral bioavailability, prodrugs
The hepatic processing of a drug before it reaches systemic circulation, reducing its bioavailability. Example: High first-pass effect of propranolol necessitates higher oral doses. Understanding this informs dosing strategies. Challenges involve inter-individual variability and disease-related hepatic dysfunction.

Fluoroquinolone-Associated Tendinopathy
Related terms: tendon rupture, collagen degradation, ciprofloxacin
A rare but serious ADR where fluoroquinolones weaken tendons, especially the Achilles tendon. Example: Sudden Achilles rupture after a course of levofloxacin in an older adult. Clinicians advise patients to avoid strenuous activity during therapy. Challenges are low incidence yet severe outcomes.

G6PD Deficiency Reaction
Related terms: hemolysis, oxidative stress, primaquine
A hemolytic reaction occurring in individuals with glucose-6-phosphate dehydrogenase deficiency when exposed to oxidative drugs. Example: Acute hemoglobinuria after dapsone administration. Screening before prescribing high-risk agents is essential. Challenges include limited awareness and variable prevalence across ethnic groups.

Genetic Polymorphism

Related terms: pharmacogenomics, CYP2C19 variant, personalized medicine
Variations in DNA that affect drug metabolism, efficacy, or toxicity. Example: Poor metabolizers of CYP2D6 experience higher plasma concentrations of codeine, risking opioid toxicity. Pharmacogenetic testing can guide therapy. Challenges involve cost, accessibility, and integration into clinical workflows.

Geriatric Syndrome
Related terms: polypharmacy, frailty, falls
A cluster of conditions common in older adults, often exacerbated by medication-related problems. Example: Sedative use contributing to falls and fractures. Comprehensive medication review and deprescribing are core strategies. Challenges include balancing disease control with functional preservation.

Hypoglycaemia
Related terms: insulin overdose, sulfonylurea reaction, neuroglycopenia
A dangerous drop in blood glucose, frequently caused by antidiabetic agents. Example: Severe hypoglycaemia after excessive glibenclamide dose. Immediate treatment includes glucose administration and monitoring. Challenges involve patient education, especially in the elderly, and adjusting regimens to avoid recurrent events.

Immune-Mediated Cytopenia
Related terms: drug-induced thrombocytopenia, neutropenia, immune hemolysis
A reduction in blood cell counts due to an immune response triggered by a medication. Example: Sudden platelet drop after heparin exposure (heparin-induced thrombocytopenia). Diagnosis requires laboratory testing and immediate drug cessation. Challenges include rapid progression and requirement for alternative anticoagulation.

Indication
Related terms: labelled use, therapeutic purpose, off-label
The approved clinical condition for which a drug is prescribed. Example: Statins are indicated for hyperlipidaemia. Using a drug outside its indication requires careful justification. Challenges include lack of robust evidence for off-label uses and medico-legal implications.

Informed Consent
Related terms: patient autonomy, risk discussion, shared decision-making
A process whereby a patient is educated about potential benefits, risks, and alternatives before starting a therapy. Example: Discussing the risk of QT prolongation before initiating a macrolide antibiotic. Essential for ethical practice and legal protection. Challenges involve communicating complex information in understandable terms.

Interaction Checker
Related terms: clinical decision support, drug interaction database, alert system
A digital tool that screens medication lists for potential interactions. Example: A pharmacist uses an interaction checker to identify a dangerous combination of sertraline and tramadol. Improves safety but may generate excessive alerts. Challenges include maintaining up-to-date interaction data and preventing alert fatigue.

Intensive Care Unit (ICU) Medication Safety
Related terms: high-risk drugs, infusion pumps, sedation protocols
The practice of managing complex medication regimens in critically ill patients, where ADRs can be rapidly fatal. Example: Avoiding potassium chloride infusion errors by using smart pumps. Emphasises double-checking and standardized protocols. Challenges involve high workload, rapid patient turnover, and multiple invasive lines.

Labeling
Related terms: package insert, contraindications, dosing information
The official drug information provided by manufacturers, including indications, warnings, and administration guidelines. Example: Reading the black-box warning on a medication before prescribing. Accurate interpretation guides safe use. Challenges include updates that may be missed by clinicians.

Liver Function Tests (LFTs)
Related terms: ALT, AST, bilirubin, hepatotoxic monitoring
Laboratory assays used to assess hepatic health, essential for detecting drug-induced liver injury. Example: Routine LFT monitoring for patients on methotrexate. Abnormal results prompt dosage adjustment or drug discontinuation. Challenges include distinguishing drug-related changes from underlying liver disease.

Long-Term Toxicity
Related terms: cumulative dose, organ damage, monitoring schedule
Adverse effects that develop after prolonged exposure to a medication. Example: Cumulative cardiomyopathy from chronic anthracycline therapy. Requires periodic evaluation and dose limits. Challenges involve balancing therapeutic benefit with risk of irreversible damage.

Medication Adherence
Related terms: compliance, persistence, patient education
The extent to which a patient follows a prescribed medication regimen. Example: Missed doses of antihypertensive leading to uncontrolled blood pressure and increased ADR risk. Strategies include simplified regimens and reminder systems. Challenges are socioeconomic barriers and complex dosing schedules.

Medication Reconciliation
Related terms: transition of care, medication list verification, safety net
A systematic process of comparing a patient’s medication orders across different care settings to avoid errors. Example: Reconciling home medicines upon hospital admission to prevent duplicate therapy. Reduces ADRs caused by omissions or unintended additions. Challenges include incomplete patient histories and time constraints.

Metabolic Acidosis
Related terms: lactic acidosis, renal failure, drug-induced
A decrease in blood pH due to accumulation of acids, sometimes precipitated by medication such as metformin in renal impairment. Example: Severe lactic acidosis after metformin overdose. Prompt discontinuation and supportive care are required. Challenges involve early detection and distinguishing

from other causes.

Metformin-Associated Lactic Acidosis (MALA)
Related terms: renal dysfunction, contraindication, emergency management
A rare but serious ADR where metformin accumulation leads to lactic acidosis, often in patients with impaired renal function. Example: Patient presenting with hyperventilation and low bicarbonate after recent dose increase. Immediate cessation and supportive measures are essential. Challenges include low incidence leading to delayed suspicion.

Minimising Polypharmacy
Related terms: deprescribing, medication review, therapeutic simplification
The practice of reducing unnecessary medications to lower ADR risk, especially in older adults. Example: Discontinuing a proton-pump inhibitor after confirming it is no longer needed. Improves quality of life and reduces drug burden. Challenges involve patient resistance and fear of disease relapse.

Nephrotoxicity
Related terms: acute kidney injury, dose adjustment, renal clearance
Kidney damage caused by a drug, potentially leading to reduced filtration and electrolyte disturbances. Example: Contrast-induced nephropathy after CT imaging. Preventive measures include hydration and avoiding nephrotoxic combinations. Challenges are identifying early signs and dose-adjusting in renal impairment.

Non-Steroidal Anti-Inflammatory Drug (NSAID) GI Toxicity
Related terms: peptic ulcer, gastrointestinal bleeding, COX-2 selectivity
Adverse gastrointestinal effects ranging from dyspepsia to life-threatening bleeding caused by NSAID use. Example: Melena after ibuprofen therapy in an elderly patient. Co-prescription of proton-pump inhibitors may reduce risk. Challenges include balancing analgesic benefit with GI safety.

Off-Label Use
Related terms: unapproved indication, clinical judgment, regulatory considerations
Prescribing a medication for a condition, age group, dosage, or route not specified in the official labeling. Example: Using gabapentin for neuropathic pain despite limited licensing. Requires informed consent and documentation. Challenges involve limited evidence and potential liability.

Opioid-Induced Constipation (OIC)
Related terms: laxatives, bowel regimen, μ-opioid receptor
A common adverse effect where opioids reduce gastrointestinal motility, leading to constipation. Example: Patient on morphine experiencing hard stools despite standard laxatives. Management includes prophylactic bowel regimens and peripherally acting μ-opioid antagonists. Challenges include patient non-adherence and under-recognition.

Ototoxicity
Related terms: hearing loss, vestibular dysfunction, aminoglycosides
Drug-related damage to the inner ear, resulting in hearing impairment or balance issues. Example:

High-frequency hearing loss after prolonged gentamicin therapy. Baseline audiometry and monitoring are recommended. Challenges include irreversible damage and limited alternative agents.

Pharmacogenomics
Related terms: personalised therapy, genetic testing, drug metabolism
The study of how genetic variations affect drug response, informing dose adjustments and drug selection. Example: Testing for HLA-B*57:01 Before initiating abacavir to prevent hypersensitivity. Enhances safety but requires integration into routine practice. Challenges are cost, test turnaround time, and clinician awareness.

Pharmacokinetics
Related terms: absorption, distribution, metabolism, excretion
The study of how the body affects a drug over time, influencing dosing and potential for ADRs. Example: Reduced clearance of lithium in renal impairment necessitates dose reduction. Understanding PK helps anticipate drug accumulation. Challenges involve inter-patient variability and disease-related changes.

Pharmacodynamics
Related terms: drug-receptor interaction, dose-response, therapeutic window
The study of how a drug exerts its effect on the body, including efficacy and toxicity. Example: Excessive dopamine blockade leading to extrapyramidal symptoms. Guides therapeutic monitoring and dose titration. Challenges include varying receptor sensitivity among patients.

Post-Marketing Surveillance
Related terms: phase IV studies, safety monitoring, real-world data
Ongoing observation of a drug's safety profile after it reaches the market, often identifying rare ADRs. Example: Detection of increased myocardial infarction rates with a new antidiabetic agent. Involves reporting systems and observational studies. Challenges are under-reporting and data heterogeneity.

Pregnancy Category
Related terms: teratogenicity, FDA classification, UK MHRA guidance
A classification indicating the potential risk of a drug to the fetus when used during pregnancy. Example: Category X drugs are contraindicated in pregnancy due to proven fetal harm. Clinicians must consider alternatives. Challenges include limited data for many newer agents.

Proarrhythmic Potential
Related terms: QT prolongation, torsades de pointes, cardiac safety
The ability of a medication to induce abnormal heart rhythms, particularly ventricular tachyarrhythmias. Example: Macrolide antibiotics may prolong QT interval, especially with other risk factors. ECG monitoring and electrolyte correction are preventive strategies. Challenges involve polypharmacy and genetic predisposition.

Protein Binding Displacement
Related terms: free drug concentration, albumin competition, warfarin interaction
When two drugs compete for plasma protein sites, increasing the free (active) fraction of one drug. Example: Sulfonamides displacing warfarin, raising INR. Monitoring drug levels and adjusting doses are

required. Challenges include unpredictable magnitude of displacement.

Renal Clearance
Related terms: glomerular filtration, tubular secretion, dose adjustment
The removal of a drug from the body via the kidneys, a key factor in dosing for patients with renal impairment. Example: Dose reduction of cefepime in patients with eGFR Serious Adverse Event (SAE)
Related terms: hospitalisation, life-threatening, death, regulatory reporting
Any untoward medical occurrence that results in death, is life-threatening, requires hospitalisation, or causes persistent disability. Example: Anaphylactic shock after a vaccine dose. Mandatory reporting to regulatory bodies is essential. Challenges include timely identification and comprehensive documentation.

Side Effect
Related terms: adverse drug reaction, predictable, dose-related
An undesired effect of a drug that occurs at normal therapeutic doses, often predictable based on pharmacology. Example: Dry mouth with antihistamines. While not always harmful, side effects can affect adherence. Challenges involve patient communication and balancing benefit-risk ratio.

Signal Detection
Related terms: pharmacovigilance, data mining, safety signal
The process of identifying patterns in adverse event data that may indicate a new risk associated with a medication. Example: Increased reports of liver injury prompting a safety alert for a new antihyperlipidaemic. Early detection leads to risk mitigation. Challenges include distinguishing true signals from background noise.

Skin Rash
Related terms: exanthema, drug eruption, hypersensitivity
A common manifestation of ADRs ranging from mild erythema to severe Stevens-Johnson syndrome. Example: Morbilliform rash after starting lamotrigine. Immediate assessment and possible drug discontinuation are required. Challenges involve differentiating from infectious rashes and assessing severity.

Stevens-Johnson Syndrome (SJS)
Related terms: toxic epidermal necrolysis, mucosal involvement, high-risk drugs
A severe, life-threatening mucocutaneous reaction often triggered by medications such as sulfonamides or antiepileptics. Example: Extensive epidermal detachment after initiation of carbamazepine. Requires urgent withdrawal of the culprit drug and specialist care. Challenges include early recognition and limited therapeutic options.

Therapeutic Drug Monitoring (TDM)
Related terms: plasma concentration, dose adjustment, narrow therapeutic index
The measurement of specific drug levels in blood to maintain a concentration within a target range. Example: Monitoring lithium levels to avoid toxicity while ensuring efficacy. Facilitates individualized dosing. Challenges involve timing of sample collection and laboratory turnaround.

Thromboembolism Risk
Related terms: deep vein thrombosis, anticoagulant interaction, estrogen therapy
The increased likelihood of clot formation associated with certain medications. Example: Combined oral contraceptives raise risk of venous thromboembolism, especially with smoking. Risk assessment and patient counseling are vital. Challenges include balancing contraceptive benefits with clot risk.

Titration
Related terms: dose escalation, stepwise adjustment, therapeutic window
The gradual adjustment of a drug dose to achieve optimal therapeutic effect while minimizing adverse effects. Example: Slowly increasing the dose of an ACE inhibitor to control blood pressure without causing cough. Requires patient monitoring and education. Challenges are patient adherence and delayed response.

Therapeutic Index
Related terms: safety margin, narrow therapeutic index, dose-response
The ratio between a drug's toxic dose and its effective dose, indicating safety. Example: Digoxin has a narrow therapeutic index, necessitating careful dosing and monitoring. Drugs with low indices demand vigilant observation. Challenges include inter-patient variability and drug interactions.

Topical Steroid Withdrawal
Related terms: rebound dermatitis, tachyphylaxis, corticosteroid dependence
A condition characterized by worsening skin inflammation after cessation of potent topical steroids. Example: Erythema and burning after stopping high-potency clobetasol. Management includes gradual tapering and supportive skin care. Challenges are patient expectations and limited treatment options.

Transplant Immunosuppression Toxicity
Related terms: calcineurin inhibitor nephrotoxicity, mycophenolate bone marrow suppression
Adverse effects arising from drugs used to prevent organ rejection. Example: Tacrolimus-induced renal dysfunction requiring dose reduction. Monitoring drug levels and organ function is essential. Challenges involve balancing rejection prevention with toxicity.

Travel-Related Medication Risks
Related terms: malaria prophylaxis, altitude sickness medication, drug-disease interaction
Adverse reactions that may occur when taking medications in different environmental or epidemiological contexts. Example: Severe diarrhoea from inappropriate use of antibiotics for traveler's diarrhea, leading to C. Difficile infection. Pre-travel counseling and appropriate prescribing mitigate risk. Challenges include limited access to medical care abroad.

Tumor Lysis Syndrome (TLS)
Related terms: hyperuricaemia, electrolyte imbalance, chemotherapy-induced
A rapid release of intracellular contents from lysed tumour cells after effective therapy, causing metabolic disturbances. Example: Acute kidney injury after initiating high-dose cytarabine in acute leukaemia. Prophylactic hydration and allopurinol are standard measures. Challenges involve early identification in high-risk patients.

Type A ADR
Related terms: dose-dependent, predictable, pharmacologic effect
A predictable, dose-related adverse reaction resulting from the known pharmacology of a drug. Example: Hypoglycaemia from insulin overdose. Management focuses on dose adjustment and monitoring. Challenges are dose calculation errors and patient misunderstanding.

Type B ADR
Related terms: idiosyncratic, unpredictable, immune-mediated
An unpredictable reaction not related to dose, often due to genetic or immune factors. Example: Severe agranulocytosis after clozapine initiation. Requires immediate drug cessation and supportive care. Challenges include low incidence making detection difficult.

Urticaria
Related terms: hives, allergic reaction, antihistamine therapy
Transient, pruritic wheals on the skin often triggered by drug hypersensitivity. Example: Hives appearing within minutes of receiving penicillin. Antihistamines provide symptomatic relief, and offending drug should be stopped. Challenges involve differentiating from chronic idiopathic urticaria.

Vancomycin-Induced Nephrotoxicity
Related terms: renal monitoring, trough levels, dose-related toxicity
Kidney injury associated with high vancomycin concentrations, particularly in patients with pre-existing renal impairment. Example: Rising serum creatinine after prolonged high-dose vancomycin therapy. Monitoring trough levels and adjusting dose reduce risk. Challenges include balancing infection control with renal safety.

Vasculitis
Related terms: immune complex, drug-induced, systemic inflammation
Inflammation of blood vessels that can be precipitated by certain medications. Example: Leukocytoclastic vasculitis following propylthiouracil therapy. Discontinuation of the offending drug and corticosteroids are often required. Challenges involve confirming causality and managing systemic involvement.

Vitamin D Toxicity
Related terms: hypercalcaemia, supplementation overdose, renal stones
Excessive vitamin D levels leading to elevated calcium, potentially causing renal impairment and vascular calcification. Example: Hypercalcaemia after high-dose over-the-counter supplementation. Monitoring serum calcium and adjusting dose are necessary. Challenges include widespread availability of supplements and patient self-medication.

Warfarin-Related Bleeding
Related terms: INR monitoring, drug interaction, anticoagulant therapy
Excessive bleeding due to over-anticoagulation with warfarin, often precipitated by interactions or dose errors. Example: Gastrointestinal haemorrhage after initiating a macrolide antibiotic. Regular INR checks and dose adjustments mitigate risk. Challenges involve maintaining therapeutic range amid dietary and drug changes.

Weight-Based Dosing
Related terms: mg/kg, pediatric dosing, obesity considerations
Calculating drug doses based on patient body weight to achieve appropriate drug exposure. Example: Chemotherapy dosing per square meter of body surface area. Important for drugs with narrow therapeutic windows. Challenges include dosing errors in obese patients and the need for accurate weight measurement.

Withdrawal of Antipsychotics
Related terms: rebound psychosis, tapering schedule, dopamine supersensitivity
Gradual reduction of antipsychotic medication to avoid relapse or withdrawal phenomena. Example: Emergence of agitation after abrupt cessation of risperidone. Tapering over weeks with monitoring is recommended. Challenges involve patient resistance and risk of symptom recurrence.

Yellow-Box Warning
Related terms: UK MHRA safety alert, serious risk, prescribing guidance
A prominent safety notice in the UK that highlights serious risks associated with a medication. Example: The yellow-box warning on valproate for women of child-bearing age due to teratogenicity. Clinicians must discuss risks and document consent. Challenges include ensuring patients understand the warning and adhering to regulatory guidance.