

SPS Medication Safety Update March 2023

Recent critical patient safety alerts, reports, and publications

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Patient Safety Alerts

- Management of National Patient Safety Alerts (22/3/23)
 - Supporting information for providers to manage National Patient Safety Alerts
 - New principles of National Patient Safety Alert management
 - Senior assessment of relevance and oversight of Alert management process.
 - Carefully plan and coordinate who the alerts should be shared with; avoid blanket emailing of Alerts and ensure any information sent out contains a plan.
 - Centrally coordinate actions; avoid forwarding to multiple directorates or divisions.
 - Agree on nominated leads/coordinators for each alert; alert issuers may not match trusts departments/heads of services effectively, e.g. the estates alert on oxygen may have significant implications for clinical practice.

Recent regulator and statutory body activity



- Class 2 Medicines Recall: Various Marketing Authorisation Holders, pholcodine-containing products, EL (23)A/09
 - Following the conclusion of a review of post-marketing safety data by the MHRA, all pholcodine-containing medicines are being recalled and withdrawn from the UK as a precaution.
- Class 2 Medicines Recall: Teva UK Limited, Levothyroxine 12.5mcg Tablets, EL (23)A/06
 - a lower than required assay result discovered during routine stability testing.
- Class 2 Medicines Recall: Ferring Pharmaceuticals Limited, GONAPEPTYL Depot 3.75mg, Powder and solvent for suspension for injection, EL(23)A/12
 - defect noticed in the seal of the needle wrapping for the 30mm needle for subcutaneous injection supplied with each pack.
- Class 3 Medicines Recall: Rosemont Pharmaceuticals Limited, Sildenafil 10mg/ml Oral Suspension, EL(23)A/11
 - the Press In Bottle Adaptor (PIBA) supplied with the pack (carton) of a specific batch is too wide to fit the neck of the medicine bottle.
- Class 4 Medicines Defect Information: Atrahs Pharma UK, Zestoretic 20mg/12.5mg Tablets, EL (23)A/05
 - incorrect PIL which omits text to alert prescribers and patients to new information that relates to acute respiratory distress, a rare side effect

Recent regulator and statutory body activity



- Class 4 Medicines Defect Information: Thornton & Ross Ltd, Methadone 1mg/mL Oral Solution BP - Sugar Free, Methadone Mixture 1mg/ml , EL(23)A/07
 - specific batches of Methadone 1mg/mL Oral Solution BP Sugar Free and Methadone Mixture 1mg/ml, have been packaged with the incorrect Product Information Leaflet (PIL).
- Class 4 Medicines Defect Information: Drugsrus Limited, Clexane 10,000 IU (100mg) / 1ml Syringes, EL(23)A/08
 - Patient Information Leaflet (PIL) packaged in specific batches of Clexane 10,000IU (100mg)/1 ml Syringes contains a typographical error in the leaflet.
- Class 4 Medicines Defect Information: Macarthys Laboratories t/a Martindale Pharma, Venlafaxine XL 150mg, 225mg, 300mg prolonged-release tablets, EL(23)A/10
 - the GTIN in the 2D barcode and the printed variable data represents the branded version of the product (Venlalic® XL prolonged-release tablets).
- Moderna (Spikevax) bivalent COVID-19 booster vaccine authorised
 - a new version of the Moderna 'bivalent' Covid vaccine (Spikevax) that targets both the original strain of SARS-CoV-2 and the Omicron BA.4 and BA.5 sub-variants. Can be used as a booster in individuals aged 12 years and above

Recent regulator and statutory body activity



- Drug Safety Update
- [Pholcodine-containing cough and cold medicines: withdrawal from UK market as a precautionary measure](#)
 - a safety review found that the benefits of these medicines do not outweigh the increased risk of the very rare event of anaphylaxis to neuromuscular blocking agents (NMBAs) used in general anaesthesia.
 - ask patients scheduled to undergo general anaesthesia involving NMBAs whether they have used pholcodine-containing medicines, particularly in the past 12 months, and maintain awareness about the potential for perianaesthetic anaphylaxis related to NMBAs
 - there is no increased risk of allergic reactions, including anaphylaxis, with other allergens following pholcodine use and the absolute risk in patients who have used pholcodine is very small, but patients should talk to a pharmacist, their GP or their surgical team if they have any questions

Recent regulator and statutory body activity



- Drug Safety Update
- [Terlipressin: new recommendations to reduce risks of respiratory failure and septic shock in patients with type 1 hepatorenal syndrome](#)
 - patients with type 1 hepatorenal syndrome terlipressin may cause serious or fatal respiratory failure at a frequency higher than previously known, and that terlipressin increases the risk of sepsis and septic shock.
 - Consider the individual benefits and risks for patients with type 1 hepatorenal syndrome when initiating terlipressin treatment, especially for those with severe renal or hepatic impairment and monitor all patients closely during terlipressin treatment. This advice is not relevant to use of terlipressin for bleeding oesophageal varices.

Recent regulator and statutory body activity



- Original pack dispensing and supply of medicines containing sodium valproate (consultation outcome)
 - proposals for OPD and the whole-pack supply – to be progressed –
 - Pharmacists flexibility to dispense up to 10% more or less than the prescribed quantity if that means they can dispense in the manufacturer’s original packs
 - Dispensing of medicines containing sodium valproate must be in whole packs to the nearest quantity prescribed (rounding either up or down).
 - No transition for the amendments on whole-pack dispensing of medicines containing sodium valproate, which will apply as soon as the HMRs come into force. Transition for other medicines in England, Wales, NI but not Scotland

Recent regulator and statutory body activity



- Direct to Healthcare professionals (sent Jan 2023)
 - Januvia 100 mg film-coated tablets (Sitagliptin) - Temporary supply of Januvia 100 mg film-coated tablets in German language packs
 - Norditropin (somatropin) NordiFlex[®] and Norditropin[®] FlexPro[®] action needed from prescribers due to supply shortage
 - ABRAXANE (paclitaxel albumin) 100mg presentation, 5 mg/ml - powder for dispersion for infusion: UK (GB) Notification of Product Shortage
 - Amvuttra 25mg solution for injection in pre-filled syringe (vutrisiran): Interim Supply of German Stock to Enable Early Treatment Prior to Availability of UK (NI) Commercial Stock
 - Kevzara ▼ 200 mg solution for injection in pre-filled syringe (sarilumab): Interim Supply of German Stock to Mitigate Supply Disruption in Great Britain and Northern Ireland

Direct HCP communication

- Direct Healthcare Professional Communication: Xevudy[®] (sotrovimab) 500 mg concentrate for solution for infusion - Important information about the expiry date of all packs
- Onasemnogene abeparvovec, (Zolgensma[®] ▼) - Fatal Cases of Acute Liver Failure
 - Following 2 fatal cases, it is recommended that a baseline LFT should be performed and then regularly for at least 3 months after infusion. This includes weekly monitoring for first month and over entire steroid tapering period, followed by every 2 weeks for another month.

Pharmacovigilance Risk Assessment Committee (PRAC)



- Meeting 13 - 16 March 2023
 - The Committee did not start or conclude any referral procedures.
 - Ongoing
 - review of topiramate use in pregnancy and women of childbearing potential
 - safety review of pseudoephedrine-containing medicines

SPC changes or Manufacturer RMM

- [Revised SPC: Actilyse \(alteplase\) 10 mg powder and solvent for solution for injection and infusion](#)
 - Caution when used in nursing women, decide whether breastfeeding should be discontinued for the first 24 hours after use. Advice not to administer in patients with known hypersensitivity to gentamicin has been removed.
- [Revised SPC: Brukinsa \(zanubrutinib\) 80 mg hard capsules](#)
 - New warnings about opportunistic infections and tumour lysis syndrome, and recommendation for pregnancy test to be done prior to treatment.
- [Revised SPC: Femodene \(gestodene + ethinylestradiol\) tablets](#)
 - Exogenous oestrogens may induce or exacerbate symptoms of hereditary and acquired angioedema
- [Revised SPC: Zestoretic 20 \(hydrochlorothiazide, lisinopril dihydrate\)](#)
 - Very rare cases of acute respiratory toxicity, including acute respiratory distress syndrome (ARDS) reported with hydrochlorothiazide. Symptoms include dyspnoea, fever, pulmonary deterioration & hypotension. If ARDS suspected withdraw Zestoretic

SPC changes or Manufacturer RMM

- [Revised SPC: Dupixent \(dupilumab\) solution for injection in pre-filled pen- all strengths](#)
 - For missed dose (MD), administer within 7 days from MD & then resume original schedule. If MD not administered in 7 days, wait until next dose on original schedule for every other week regimen or administer dose, starting new schedule based on this date for every 4 week regimen.
- [Revised SPC: Repevax \(diphtheria, tetanus, pertussis and poliomyelitis\) vaccine](#)
 - New stability data, in case of temporary temperature excursion only, suggest that the vaccine components are stable at temperatures up to 25°C for 72 hours. After this, Repevax should be used or discarded.
- [Revised SPC: Vaxelis \(diphtheria, tetanus and pertussis/poliomyelitis/ haemophilus influenzae type b/hepatitis b vaccine\)](#)
 - Hypersensitivity and anaphylactic reaction have been added as rare adverse drug reactions
- [Revised SPC: Vaxzevria, suspension for injection, COVID 19 Vaccine \(ChAdOx1 S \[recombinant\]\)](#)
 - Parasthaesia and hypoaesthesia have been added to SPC as uncommon adverse effects, and cutaneous vasculitis as an adverse effect of unknown frequency.

SPC changes or Manufacturer RMM

- [Revised SPC: Nifedipress \(nifedipine\) preparations](#)
 - Various changes to the SPC include new contra-indications in women who are or who may become pregnant (previously restricted in pregnancy to use in those with severe hypertension unresponsive to standard therapy), in those with acute porphyria, and in patients with Kock pouch.
- [Revised SPC: Ferriprox \(deferiprone\) – all presentations](#)
 - Due to the genotoxic potential of deferiprone, SPC now recommends that women of childbearing potential and men use effective contraceptive measures during treatment and for 6 months following completion of treatment for women and 3 months for men.
- [Revised SPC: Progynova \(estradiol\) preparations](#)
 - For women with impaired liver function, close supervision is needed and in case of deterioration of markers of liver function, use of HRT should be stopped. Treatment is contra-indicated in patients with severe hepatic disease
- [Revised SPC Prialt \(ziconotide\) 100 micrograms/mL solution for infusion](#)
 - Update regarding the increased risk of suicide. Use is contraindicated in patients with a history of suicidal attempt or suicidal ideation with ziconotide.
- [Revised SPC: Dovato 50 mg/300 mg \(dolutegravir, lamivudine\) film-coated tablets](#)
 - Dovato is not recommended for use in patients with creatinine clearance <30 mL/min. No dose adjustment in mild or moderate renal impairment but lamivudine exposure is significantly increased in patients with a creatinine clearance < 50 mL/min.

SPC changes or Manufacturer RMM

- [Revised SPC: Zyban \(bupropion\) 150 mg prolonged release tablets](#)
 - May unmask Brugada syndrome, a rare hereditary disease of cardiac sodium channel with specific ECG changes (ST segment elevation & T wave abnormalities in right precordial leads), which may lead to cardiac arrest and/or sudden death. Caution advised in at risk patients.
- [Revised SPC: Xeljanz \(tofacitinib\) preparations](#)
 - Warnings regarding major adverse cardiovascular events and advises that tofacitinib should only be used if no suitable treatment alternatives are available in patients with history of atherosclerotic cardiovascular disease or other cardiovascular risk factors.
- [Revised SPC: Cefuroxime sodium for injection 1.5g](#)
 - Kounis syndrome (a cardiac disorder) and Drug Reaction with Eosinophilia and Systemic Symptoms (DRESS) have been added as adverse drug reactions of an unknown frequency
- [Revised SPC: Oncaspar \(pegaspargase\) 750 U/ml powder for solution for injection/infusion](#)
 - Advice to premedicate patients with paracetamol, an H-1 receptor blocker (e.g. diphenhydramine), and an H-2 receptor blocker (e.g. famotidine) 30-60 minutes prior to administration of Oncaspar to decrease risk & severity of both infusion and hypersensitivity reactions.

SPC changes or Manufacturer RMM

- [Revised SPCs: Oruvail \(Ketoprofen\) – all products](#) and [Naproxen Orion 25 mg/ml oral suspension](#) and [Aceclofenac tablets](#)
 - risk of oligohydramnios resulting from foetal renal dysfunction from 20th week of pregnancy onward (reversible upon discontinuation) ‘and reports of ductus arteriosus constriction after treatment in second trimester, mostly resolved after treatment cessation’.
- [Revised SPC: Slozem \(Diltiazem\) – all products](#)
 - careful monitoring of diabetic patients as possible increase in blood glucose, risk of inducing bronchospasm and asthma aggravation. Drug interaction, warning added about increased drug exposure with grapefruit juice
- [Revised SPC: Envarsus \(tacrolimus\) 4 mg prolonged-release tablets](#)
 - Strengthened warnings regarding co-administration with CYP3A4 inhibitors or inducers. Avoid use with strong CYP3A4 inhibitors; if unavoidable, monitor tacrolimus levels frequently; renal function, ECG and clinical condition should also be closely monitored.

SPC changes or Manufacturer RMM

- [Risk Minimisation Materials: Truxima \(rituximab\) patient alert card](#)
 - Discusses side effects of treatment, including infection and progressive multifocal leukoencephalopathy, the signs/symptoms to look out for
- [Educational Risk Minimisation Materials for Aubagio \(teriflunomide\)](#)
 - Materials include a healthcare professional education/discussion guide, which reviews the risks of treatment and required monitoring that should be covered with the patient at first prescription, and a Patient Card containing important safety information.
- [Risk minimisation materials: Byooviz \(ranibizumab\) solution for injection – patient booklets](#)
 - A series of patient booklets for treatment of age-related macular degeneration, proliferative diabetic retinopathy, retinal vein occlusion & choroidal neovascularisation provide an overview on mechanism of action, administration, adverse reactions & when to seek medical attention
- [Risk minimisation materials: Replagal \(agalsidase alfa\) concentrate for solution for infusion – healthcare professional and patient guide](#)
 - guides advise the treating physician and patient/carer on how to self-administer this product, how to recognise and mitigate adverse events and remind patients to complete their infusion diaries.

Drug shortages and discontinuations

Recent medicine shortages and discontinuations are available via: the [SPS Medicines Supply Tool](#) (registration required to access)

Discontinuations highlighted by SPS supply tool in last month

- [Sterculia \(Normacol\) granules and Sterculia with Frangula \(Normacol Plus\) granules](#)
- [Insuman Basal cartridges and pre-filled Solostar pens](#)
- [Insuman Comb 25 cartridges and pre-filled Solostar pens](#)
- [Diazepam 10mg/2ml emulsion for injection ampoules](#)

This is not a comprehensive list. Only critical safety medication shortages have been highlighted.

Drug shortages and discontinuations

Recent medicine shortages and discontinuations are available via: the [SPS Medicines Supply Tool](#) (registration required to access)

New Shortages highlighted by SPS supply tool in last month

- [Shortage of Capsaicin 0.075% \(Axsain\) and 0.025% \(Zacin\) cream](#)
- [Paracetamol suppositories](#)
- [Promethazine hydrochloride \(Phenergan elixir\) 5mg/5ml oral solution sugar free](#)
- [Dalteparin \(Fragmin\) 10,000units/4mL solution for injection ampoule](#)
- [Irinotecan hydrochloride 330mg/ 220ml and 360mg/ 240ml bags](#)
- [Pilocarpine hydrochloride 4% eye drops](#)
- [Menopur \(menotropin\) 75IU ,150IU ,600IU and 1200IU solution for injection vials](#)
- [Olatuton \(Octreotide\) 10mg, 20mg and 30mg powder and solvent for prolonged-release suspension for injection](#)
- [Ciprofloxacin 400mg in 200ml solution for injection](#)
- [Human corticotrophin releasing hormone 100microgram vials \(unlicensed\)](#)
- [Idacio \(adalimumab\) 40mg/0.8ml solution for injection in prefilled pen](#)

This is not a comprehensive list. Only critical safety medication shortages have been highlighted.

Specialist Pharmacy Service



- [SPS Spotlight Monthly Digest](#)

A slide deck providing updates on existing materials and activities from across SPS, and signposting to upcoming events and activities. Please distribute to relevant healthcare professionals and their teams.

- [New Medicines News](#)

February highlights of recent new product launches and significant medicines regulatory changes.

- [New Product Evaluations](#)

- list of new product evaluations that are freely available to NHS staff via the internet

- [Choosing between available adalimumab products](#)

Understand the adalimumab products that are available on contract to the NHS. Choose between them appropriately for organisations or individuals.

- [Using folic acid with methotrexate in rheumatoid arthritis](#)

Folic acid is used to reduce methotrexate associated adverse effects in people with rheumatoid arthritis. This page guides appropriate dosing.

Specialist Pharmacy Service



- [Medicines in Compliance Aids Stability Tool](#)
 - Information on stability for tablets and capsules to help create MCAs for patients. Find entries and then build and print lists specific to your MCA.
- [Treating urinary disorders while breastfeeding](#)
 - Oxybutynin is preferred for urinary disorders during breastfeeding. Recommendations apply to full term and healthy infants only.
- [Preparing to use ranibizumab biosimilar](#)
 - Update: Links to SPCs added for Byooviz and Ximluci
- [Good governance when implementing ranibizumab biosimilar](#)
 - Update: Information for Byooviz and Ximluci included. Patient information sheet updated.
- [The licence and supporting evidence for ranibizumab biosimilar](#)
 - Update: Licence and supporting evidence for Byooviz and Ximluci added

Specialist Pharmacy Service



- [Managing the risks of using effervescent tablets in children](#)
Careful use of effervescent or soluble tablets to deliver part tablet doses for children and neonates can minimise risks of toxicity or suboptimal therapy.
- [Using amlodipine or MR felodipine for angina and hypertension](#)
Guidance on choosing and switching between amlodipine and modified-release (MR) felodipine for angina and hypertension.
- [Children's medicines: resources to support answering questions](#)
Suggested resources to help primary care healthcare professionals find information on medicines use in paediatrics.
- [Palliative care: resources to support answering questions](#)
Suggested resources to help primary care healthcare professionals find information to answer questions.
- [Vaccines and immunisation: resources to support answering questions](#)
Suggested resources to help primary care healthcare professionals find information to answer questions on vaccines and immunisation.

Specialist Pharmacy Service



- [Accessing the CAR-T training passport for clinical pharmacists](#)

Members of the Pan UK Pharmacy Working Group for ATMPs have collaborated with UK BMT (Bone Marrow Transplant) pharmacists to produce a CAR-T training passport.

- [Pharmacy Manual Checklist for Clinical Trials for ATIMPs](#)

Pharmacy Manual content expectations for optimal site implementation of ATIMP Clinical Trials.

- [Accredited training for pharmacy staff within technical services](#)

Pharmacy staff involved in the preparation of aseptically-prepared products should be suitably trained and accredited to assure a safe service.

- [Understanding the falsified medicines directive](#)

- An overview of the changes to the requirements for medicines 'safety features' following the UK's departure from the EU

- [Assurance of aseptic preparation of medicines](#)

- Update: Assurance of aseptic preparation of medicines – Guidance to replace EL(97)52 in England is now published. Link to final guidance added.

National guidance, publications and resources

- NHSE - [What is a biosimilar medicine?](#)
 - supporting the safe, effective and consistent use of biosimilar medicines to benefit patients
- NIHR - [What information do people need about their blood tests?](#)
 - patients should have sufficient information to understand what tests are being done and why
 - it would be helpful for patients if doctors discuss all results (even when they are normal) and how they relate to symptoms or treatment.
- [CPOC The National Safety Standards for Invasive Procedures \(NatSSIPs\)](#)
 - These revised standards, which are intended to help NHS organisations provide safer care and reduce the number of patient safety incidents, will be adopted by all hospitals across the UK. The range of procedures to which the safety checks apply has been expanded.
 - The WHO Five steps to safer surgery of Team Brief, Sign In, Time Out, Sign Out and Handover/Debrief has been expanded to include three more steps: Consent and Procedural verification; Safe use of implants; and Reconciliation of items (to prevent retained foreign objects). 'The NatSSIPs Eight' should be in place for every relevant patient.
 - CPOC is a cross-organisational, multidisciplinary initiative led by the Royal College of Anaesthetists to facilitate cross-organisational working on perioperative care for patient benefit. Intended to share the learning and best practice to support multidisciplinary teams and organisations to deliver safer care.

National guidance, publications and resources

- **HSIB**
- [Interim report explores impact of staff wellbeing on patient safety](#)
 - This third interim report for the HSIB investigation on staff wellbeing across urgent and emergency care systems shows a strong link between patient safety and wellbeing and recommends this be included as a critical component of patient safety in the NHS Patient Safety Strategy.
- [Assessment of risk during the maternity pathway](#) (final report)
 - Review identified an overarching theme around need to facilitate & support individualised risk assessments for pregnant women/people to improve maternity safety; 7 specific 'risk assessment themes' were identified
- [Care delivery within community mental health teams](#)
 - Report emphasises NHS trusts should be moving away from 'standardised' scoring tools that categorise a patient as 'high, medium or low risk' as they are a poor predictor of repeated self-harm/future suicide (SU). Investigation prompted by case of patient with repeated SU attempts
- **WHO**
- [World Patient Safety Day 2023: Engaging Patients for Patient Safety](#)

National guidance, publications and resources

- **NHSE**
- [Optimising personalised care for adults prescribed medicines associated with dependence or withdrawal symptoms](#)
 - actions to help systems develop plans that can support people who are taking medicines associated with dependence and withdrawal symptoms.
- [Assurance of aseptic preparation of medicines](#)
 - Guidance sets out governance and regulatory arrangements for aseptic preparation of medicines for NHS patients in England & replaces the 1997 NHS Executive letter EL(97)52, Aseptic dispensing in NHS hospitals. It also describes the inter-relationships between the CQC, MHRA & GPhC
- **BBC**
- [Scotland first country to ban anaesthetic desflurane because of environmental threat](#)
 - NHS data suggests desflurane has a global warming potential 2,500 times greater than carbon dioxide. Its use has already declined across some UK hospitals but Scotland, followed by a similar ban by NHS England in 2024, will prohibit its use except for exceptional circumstances.
- **All Wales Medicines Strategy Group**
- [Polypharmacy in older people: A guide for healthcare professionals](#)
 - Includes practical guides for stopping antihypertensives, benzos & Z-drugs, oral corticosteroids, antidepressants, bisphosphonates, acid suppressants, opioids in non-cancer pain, gabapentinoids in neuropathic pain, and antipsychotics, AChE inhibitors & memantine in dementia.

National guidance, publications and resources

- **Neonatal & Paediatric Pharmacists Group**
- [Position Statement 2023-02: Enteral Calcium and Phosphate Supplementation in Neonates and Children](#)
 - There are no licensed oral liquid calcium or phosphate products available in UK. NPPG would welcome development of following as licensed oral calcium and phosphate liquid products:
solution providing 1mmol/mL of elemental calcium & solution providing 1mmol/mL of phosphate.
- **Advisory Council on the Misuse of Drugs**
- [Nitrous oxide: updated harms assessment](#)
 - Group concluded nitrous oxide should not be subjected to control under Misuse of Drugs Act 1971 as current evidence suggests health & social harms not commensurate with control under this Act, and the Psychoactive Substances Act 2016 remains appropriate legislation.

Prevention of Future Death Reports (Regulation 28)



Courts and Tribunals Judiciary

[Ref: 2023-0070](#)

- Deceased worked for Transport for London and had an accident over 20 years ago injuring her back and resulting in continuing chronic back pain for which she took prescribed medication. Family report that she was not very good at managing this medication. She was prescribed large doses of gabapentin, tramadol and amitriptyline. She was also prescribed fentanyl patches and oral diazepam.

Cause of death

- Likely inadvertent overdose of tramadol and that, in combination with other medicines, all possessing the ability to depress the central nervous system, had the synergistic effect of causing respiratory depression and death. A fall may well have contributed a postural component to the respiratory depression

Concerns

- Polypharmacy including gabapentinoids and opiates represents a severe safety risk in patients with a iatrogenic drug dependency. At the time of her death prescribed, diazepam, amitriptyline tramadol, gabapentin and fentanyl patches
- The police and paramedics attending the scene describe the finding of “hundreds” of packets of medications, some opened, some unopened.

Primary research- Medication Safety

- [Factors influencing in-hospital prescribing errors: a systematic review](#)
 - Review (6 qualitative and 13 quantitative studies) identified 40 unique factors influencing in-hospital prescribing errors, the most frequently identified facilitating factor (39.6%; n=19) was 'insufficient (drug) knowledge, prescribing skills, and/or experience of prescribers'.
 - BJCP
- [Nitrous oxide-induced subacute combined degeneration of the cord: diagnosis and treatment](#)
 - Recreational use has increased rapidly in recent years, with corresponding rise in cases of subacute combined degeneration of cord. Based on experience in East London, an area of high N2O use, clinicians provide practical advice on its recognition, investigation and treatment.
 - [The Advisory Council on the Misuse of Drugs is expected to provide a recommendation in 2023 on whether nitrous oxide should be criminalised.]
 - Practical Neurology
- [Prescribing errors in children: what is the impact of a computerized physician order entry?.](#)
 - The overall error rate was significantly reduced after the implementation of the CPOE. The severity of potential harm was higher in the post-CPOE period, which implies that low-severity errors were substantially reduced after CPOE implementation. Dosing errors were not reduced, but missing information errors and drug selection errors were reduced. On the other hand, medication reconciliation problems increased
 - European Journal of Pediatrics
- [Challenges and Strategies for Patient Safety in Primary Care: A Qualitative Study](#)
 - Key safety issues included the lack of interoperability among health information systems, clinician-patient communication failures, and challenges with medication reconciliation.
 - Am J Med Qual

Primary research- Medication Safety

- [A decade after Francis: is the NHS safer and more open? Editorial](#)
 - Editorial discusses its legacy for patient safety in England & what NHS can do to realise improvement & reduce likelihood of further tragic events. It notes sustainable improvement is likely to rest more on achieving the spirit than the letter of Francis's recommendations.
 - British Medical Journal
- [Adverse drug reaction related to drug shortage: A retrospective study on the French National Pharmacovigilance Database.](#)
 - This study emphasizes the clinical impact of drug shortage in terms of ADRs, ME and inefficiency. These observations underline the importance of a global health policy programme to limit the occurrence of drug shortages and to reinforce the information provided to patients and health care professionals in this context to limit risk.
 - British Journal of Clinical Pharmacology
- [Medication incidents and medication errors in Danish healthcare: A descriptive study based on medication incident reports from the Danish Patient Safety Database.](#)
 - The most common drugs for severe and fatal MEs were warfarin, methotrexate, potassium chloride, paracetamol and morphine. When the reporting ratio for all MEs and harmful MEs was considered, other drugs than the most frequently reported ones were found to be associated with harm.
 - Basic and Clinical Pharmacology and Toxicology
- [Evidence of potential pro-hemorrhagic drug interactions between CYP3A4 inhibitors and DOACs: analysis of the FAERS database](#)
 - Analysis found significant haemorrhagic signal with coadministration of: apixaban with clarithromycin and posaconazole; dabigatran with azithromycin, fluconazole, itraconazole and ketoconazole; and itraconazole with rivaroxaban
 - BJCP