

## Shared Learning from Medication Safety Events – Risk of Propranolol Toxicity in Overdose

**To:** community mental health teams, Mental health medical team, GPs

**From:** Pharmacy Team, email [cft.pharmacycft@nhs.net](mailto:cft.pharmacycft@nhs.net)

**Date:** 16<sup>th</sup> September 2024

### SUMMARY

Within the Southwest region, there have been several incidents of overdose involving young people prescribed propranolol for anxiety symptoms. To help reduce further harm from this under recognised medication safety risk, Cornwall Partnership Foundation Trust would like to raise awareness of this safety theme.

The clinical evidence for using propranolol in treatment of physical symptoms related to anxiety such as palpitations, sweating and tremor in children and young people is yet to be established. Propranolol isn't included in the Children's BNF for this indication. When taken in overdose it is severely toxic and difficult to treat.

Although local concerns are primarily in relation to young people, the same issues apply in the general adult population. A report by the Health Safety Investigation Branch (HSIB) in 2020 highlighted the potentially under-recognised risks of harm from toxicity of propranolol in overdose. <https://www.hssib.org.uk/patient-safety-investigations/potential-under-recognised-risk-of-harm-from-the-use-of-propranolol/investigation-report/>

### ACTIONS

In line with the HSIB report, to mitigate risks, prescribers should consider the measures below for existing prescribing and avoid initiating new prescriptions outside of NICE guidance.

- Check patient's history for evidence of suicidal thoughts and self-harm (particularly overdosing).
- Review regularly.
- Prescribe the lowest effective dose.
- Limit the quantity of tablets prescribed.
- Audit prescribing to understand current practice.
- Review people prescribed propranolol who have increased risk factors for example those co-prescribed antidepressants and be aware of the high prevalence of psychiatric co-morbidities associated with a diagnosis of migraine which is another common indication for prescription of propranolol. It is thought that people with depression and migraine could be at an increased

risk of using propranolol for self-harm, and co-prescribing of an antidepressant may increase the risk of toxicity in cases of overdose and cardiac side effects.

## CLINICAL ADVICE AND RESOURCES

When anxiety presents the first line intervention, in any age group, should always be psychological. In children and young people, if anxiety is very severe and functionally impairing then they should be offered CBT.

If it is less severe but still needing intervention, then the options are:

- Self-help: i.e. Use online resources specifically aimed at children and young people, [www.happymaps.co.uk/](http://www.happymaps.co.uk/) [www.mindyourway.co.uk](http://www.mindyourway.co.uk) [www.youngminds.org.uk](http://www.youngminds.org.uk) via CFT internet site: [www.cornwallft.nhs.uk/camhs](http://www.cornwallft.nhs.uk/camhs)
- There are other resources for adults (and YP 16 yrs+) via the CFT internet site: [Talking Therapies | Cornwall Partnership NHS Foundation Trust \(cornwallft.nhs.uk\)](http://TalkingTherapies.CornwallPartnershipNHSFoundationTrust.cornwallft.nhs.uk)

**Specialists** may consider medication for children and young people and there is some evidence that an SSRI should be the first line (usually Sertraline) see: [Pharmacotherapy for anxiety disorders in children and adolescents - PubMed \(nih.gov\)](http://Pharmacotherapyforanxietydisordersinchildrenandadolescents-PubMed.nih.gov)

There are significant risks associated with propranolol and benzodiazepines which should be avoided.

**If GPs feel the patient cannot wait for referral for specialist assessment and advice is needed urgently, please contact the CAMHs Access Team on 01209 881 600. The team are available Monday to Friday, 9am to 5pm. Or via email [cft.camhsreferrals@nhs.net](mailto:cft.camhsreferrals@nhs.net)**

GPs can initiate and prescribe SSRIs for *adults* in line with **NICE**: [Escitalopram, paroxetine, and sertraline | Prescribing information | Generalized anxiety disorder | CKS | NICE](http://Escitalopram,paroxetine,andsertaline|Prescribinginformation|Generalizedanxietydisorder|CKS|NICE)

### Further information for colleagues in Primary Care:

The **RCGP** have produced a 5-minute 'change your practice' video on Propranolol Toxicity which can be found via [Login | Royal College of General Practitioners \(site.com\)](http://Login|RoyalCollegeofGeneralPractitioners(site.com)) requires registration (free) to access.

**PrescQIPP** have produced resources to support audit which can be found here: [Hot topics | PrescQIPP C.I.C](http://Hottopics|PrescQIPP C.I.C) requires registration (free) to access.



**Cornwall Partnership**  
NHS Foundation Trust

SSRIs for the treatment of Depression, Obsessive Compulsive Disorder and Anxiety in Children and Young People Shared Care Guideline can be accessed via the CFT documents library via the link.

Approved by Area Prescribing Committee January 2025  
Review by January 2026