



Safely Managing Potentially Teratogenic Drugs in Primary Care

LEARNING POINTS:

- **Significant improvement in metrics over 15 months**
- **A central recall system, with repeat monthly searches as in the SPC safety team can significantly increase patients' awareness of teratogenic drugs and ensure appropriate contraceptive advice.**
- **Benefits of a dedicated team away from the noise of frontline General Practice**
- **Benefits of working at scale – ability to resource/staff with relevant interest and expertise**
- **Secondary care systems poor**
- **Needs to be reactive to new MHRA concerns and new patients**
- **General practice only place capable and competent to manage**
- **Numbers are large – need an efficient digital system**

Introduction

- For many years there have been concerns about teratogenic medications in Primary Care.
- Valproate is the best-known example, with early concerns in late 1960's – 1972, leading to first studies in 1973-1974, and clear evidence in 1980's of neural tube defects and other neurodevelopmental risks in the mild 2000's.
- Regulatory actions to warn women of childbearing age was slow to be fully implemented. Noted in "First do no harm" Baroness Cumberlege 2020 (Independent Medical Devices Safety Review).
- Recently the risk of the children of men taking valproate has been identified. (Sept 24 MHRA)
- However, valproate is just one of several medications used in Primary Care with teratogenic potential. An audit at Haven Health 2018 identified valproate prescriptions just 10% of potentially teratogenic drugs in women of childbearing age.
- New rules are cascaded to practices by the MHRA CAS alert system. SPC Clinical Safety Teams assess these.
 - Identify appropriate patients and messages sent.
 - 3 monthly reports identify new patients and messages sent out.
- SPC have an established monthly Clinical Safety Audit, and appropriate alerts are added to the monthly report for clinical leads.
 - These are communicated to practices via the Clinical Leads at each site.
 - There is a monthly board report by the Clinical Safety Lead and a monthly meeting with the Clinical Pharmacists
- In October 2025 reorganised the women's health metrics into a 'teratogenic drugs' section.
- Reflecting increasing awareness of this issue and MHRA alerts.
- **It is unhelpful that there is no official list of potential teratogenic medication with suggested actions to support Primary Care.**



SPC Clinical Safety team have developed a system where new concerns are initially actioned by the CAS Team and then included in the monthly Clinical Safety Audit program.

MHRA Search	SPC Associated Metric	Actions Taken
January 2021 -Risks of physical birth abnormality	WH-6 On teratogenic drugs, childbearing age, no LARC advice in last 18m. Drugs include valproate, carbimazole, modafinil, pregabalin & topiramate	List medications, message every patient, code added.
April 2018 - 10% physical birth abnormalities; 30 - 40% learning and speaking disability affected, including autism	WH-7 Valproate with no completed risk acknowledgement form on record ever	Completed Forms. Updated guidance to provide lists of eligible patients to secondary care providers – WSH, IHT, NSFT. Search for new patients – details forwarded
April 2018 - 10% physical birth abnormalities; 30 - 40% learning and speaking disability affected, including autism	WH-7a Valproate with no referral for risk acknowledgement form on record ever	When ARAF received in practice, code 1366401000000107: 'Valproate Annual Risk Acknowledgement Form completed' added (Site Action)
June 2024 – Increased risk congenital malformations	WH-8 Topiramate on repeat and no Advice or LARC's code on record	Initial text to all patients, monthly review and message out to all new patients. (** see below)
June 2024 – Increased risk congenital malformations	WH-8a Topiramate on repeat and no Pregnancy Prevention Program code on record	Initial text to all patients to book an appointment. Paper form to be completed in practice (Clinical/site action). Code 1129761000000105 Pregnancy Prevention Programme. (New Topiramate codes: Completed Ycj8Z, Epilepsy Ycj8j, Migraine Ycj8i) added
February 2019 – risk greater in first trimester at doses >15mg	END-5 Carbimazole childbearing age NOT given LARC's advice	Initial search and text out to all patients, added the monthly Clinical Safety search, text out to new patients
September 2024 – Increased risk neurodevelopmental disorders 4-5.6%	MISC-6 Males 16-55 on Sodium Valproate with no advice about side effects of drug treatment coded	Initial search and text out to all patients, added the monthly Clinical Safety search
Carbimazole & Modafinil		CAS Team Repeat Action. 3 monthly searches for patients newly prescribed drugs and message sent encouraging LARC
Antiepileptic Drugs		CAS Team Repeat Action. 3 monthly searches for patients newly prescribed drugs and message sent encouraging LARC. Antiepileptic drugs include Carbamazepine, phenobarbital, phenytoin, topiramate and pregabalin



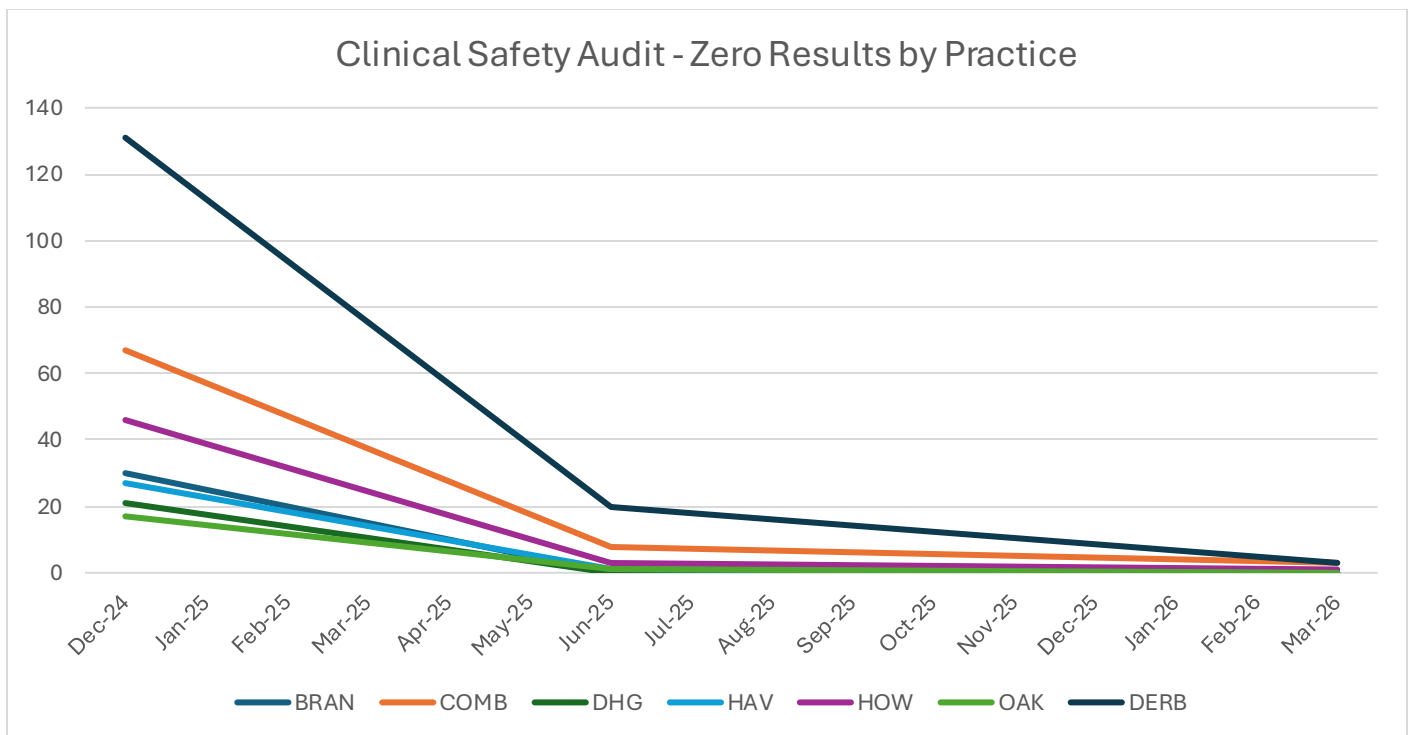
** Text Message = Our records show that you have been prescribed medication for Pain Management or Epilepsy. Recent guidance suggests it may increase birth defects in children. DO NOT STOP your medication, but please seek advice if you have any concerns and please use effective contraception.

For more info, please see the links:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/950069/Epilepsy-medicines-in-pregnancy-leaflet.pdf

<https://www.icash.nhs.uk/contraception-sexual-health/contraception/long-acting-reversible-contraception>

Results



- Reflects significant work, different action related to risk
- Rapid early improvement but consistent decline
- Stepwise improvement over 14 months – Down to zero March 2020
- Taking into account new patient's joining, continually moving targets
- Practice level actions evidenced good clinical engagement (clinicians and pharmacists)
- Secondary care providers have needed chasing up by the Clinical Safety Lead and practices to complete and chase the ARAF (a mandatory obligation)
- Evidence of robust systems in place
- Valproate (highest risk drug) use is generally decreasing (see audit below)
- There are other medications. Also see Audit (Appendix B)
- Evidence of effectiveness of Clinical Safety Team. Clinical oversight, data support and with practice engagement



Actions

- Further review of all teratogenic drugs to fill in the gaps (see Sheffield Pharmacist data charts - link to pdf below)
- System for new alerts to be added as they arise
- Move to annual ARAF (risk acknowledgement form for Topiramate. Consideration of digital completion as long as one paper copy in place)
- ACE/ARB
 - Previous site audit at HH showed ACE/ARB medication commonest potentially teratogenic drug prescribed
 - Patient often lower risk as older >45yrs but not 'no risk' (up to 55yrs)
 - Alert added across SPC November 2025 to new female patients commenced on ACE/ARB. This alert suggested by Oluyemisi Owoeye-Olowe (GP registrar – Combs Ford Practice)
 - Text out to all female patients on ACE/ARB to alert to risks.
- Use of Clinical Safety team to ensure secondary care compliance with valproate ARAF.

Appendix A – Sodium Valproate Audit across SPC

Appendix B – Haven Health Audit Teratogenic Drugs (conception wise) – Table Updated

References:



Medicines with
teratogenic potenti

South Yorkshire ICB – Medicines with teratogenic potential – Guidance for primary care

clinicians



aide-memoire_table
-2024 (1).pdf

MHRA – Pregnancy testing and contraception for pregnancy prevention during treatment with

medicines of teratogenic potential



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Haven Health Audit Teratogenic Drugs (conception wise) - Sonia Sanam (GP Registrar)



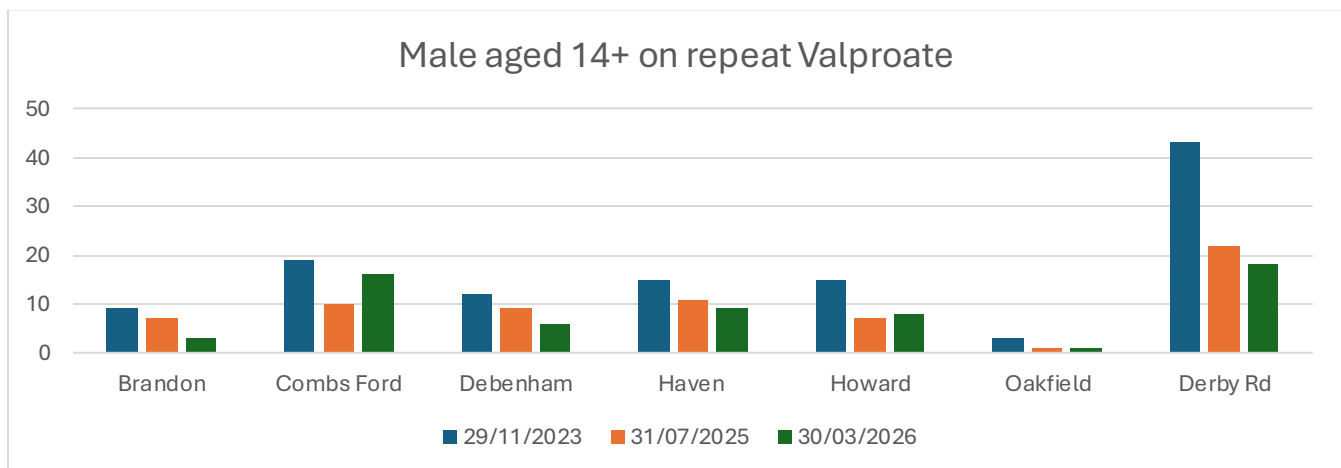
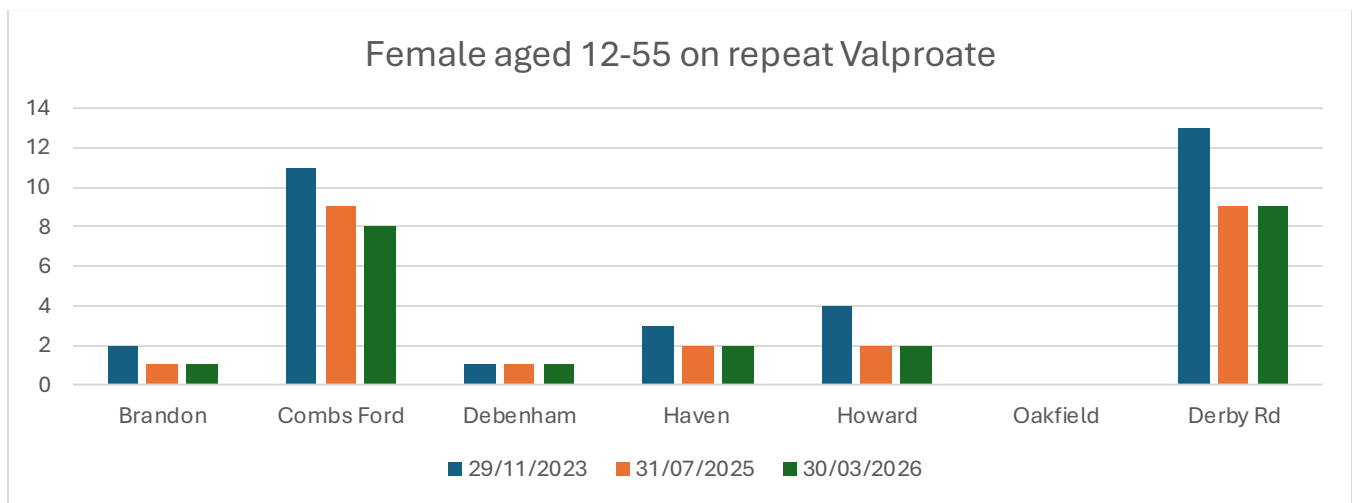
Appendix A:

Audit: Sodium Valproate Audit across SPC

Date: 31/07/2025 – Updated 30/03/2026

Audited by: Dr P Driscoll & Mrs J Layton

RESULTS:



COMMENTS:

- Falling numbers of patients on valproate – Male and Female
- MHRA Alerts – Female: Valproate Risk assessments 29/10/2024
Male: 11/12/2023 & 05/03/2025
- Quality Safety Audit – Teratogenic Drugs 09/12/2024
 - MISC-6: Males 16/55 on Sodium Valproate with no advice about side-effects of drug treatment
 - WH-07: Valproate with no completed risk acknowledgement form on record in last 13m
 - WH-07a: Valproate with no referral for risk acknowledgement form on record in last 13m
- Issue is appropriate with hospital/Specialist annual review and communication back to practices
- Monitored by Clinical Audit Team on WH-07 and WH07a



Appendix B:

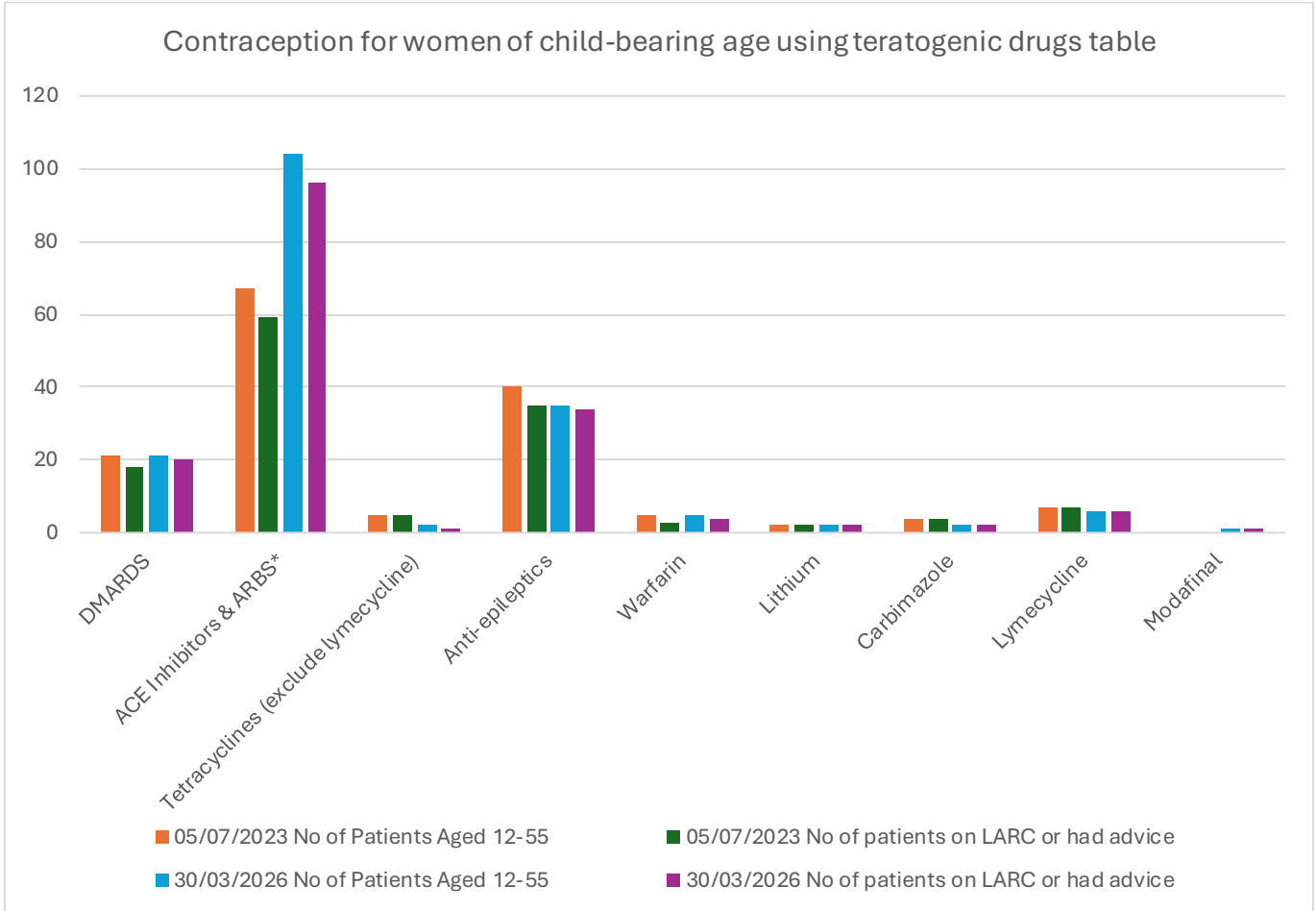
CONTRACEPTION FOR WOMEN USING TERATOGENIC DRUGS TABLE

Haven Health Population - 8560

Date: March 2026

Date:	22/05/2023	05/07/2023	05/07/2023	30/03/2026	30/03/2026
Drug Name	No of Patients Aged 12-55	No of Patients Aged 12-55	No of patients on LARC or had advice	No of Patients Aged 12-55	No of patients on LARC or had advice
Azathioprine	3	3	3	3	3
Leflunomide	4	4	4	3	3
Mesalazine	2	3	2	1	1
Methotrexate	10	9	8	8	7
Mycophenolate	0	0	0	0	0
Sulfasalazine	2	2	1	6	6
ACE Inhibitors & ARBS*	72	67	59	104	96
Tetracyclines (exclude lymecycline)	6	5	5	2	1
Carbamazepine	0	0	0	4	4
Warfarin	3	5	3	5	4
Phenytoin	0	0	0	0	0
Lithium	2	2	2	2	2
Valproate	4	4	2	2	2
Carbimazole	4	4	4	2	2
Lymecycline	6	7	7	6	6
Pregabalin	23	23	20	18	18
Modafinil	0	0	0	1	1
Phenobarbital	0	0	0	0	0
Topiramate	13	13	13	11	10
Totals	154	151	133 (86%)	178	166 (93%)

*ARB's included March 2026



- Most patients received LARC advice
- Most frequent ACE/ARB 58%, Pregabalin 11%, DMARD 12% (covered by SPC safety prompt)
- DMARDS – secondary care shared care agreements