

Quality Improvement Project: Obstetric Medications Quick Reference Guide

INTRODUCTION

Senior House Officers (SHO) newly starting in Obstetrics and Gynaecology often find an added layer of complexity in terms of medication prescription of women in the perinatal period due to unfamiliarity with its effects on pregnancy. Further complexity is introduced as usual sources of prescription, such as the BNF, usually state that medications are not advised by manufacturers in the perinatal period.

This Quality Improvement Project (QIP) intends to bridge this unfamiliarity by introducing an easy to use, accessible, quick reference guide for commonly used medications typically prescribed by SHOs and a risk assessment as to their suitability for use in the perinatal period.

The Obstetric Medications Quick Reference guide was created and made available locally (Lister Hospital, East and North Hertfordshire NHS Trust) via mobile-phone and placed in existing 'SHO guides' on the wards in the Early Pregnancy Unit, Maternity Triage, and post-natal ward (Gloucester).

As the project team consists of current/future GP Specialty Registrars, future goals include introduction of the guide into General Practice settings and the wider hospital setting (e.g. A&E, urgent care). If capacity allows, the resource can undergo further QIP cycles and iterations with future cohorts of trainees.

METHODS

We initially formed SMART goals to plan the project as follows:

- **Specific** – to create a single-page, easy to use reference guide to improve confidence in prescribing
- **Measurable** – to have a pre and post QIP survey to assess functionality.
- **Attainable** – we considered this to be attainable, particularly as the medication inclusion criteria would be based on commonly prescribed medications as a SHO cohort, and good support from key stakeholders (Consultant Supervision, Pharmacy Team, SHO engagement)
- **Relevant** – while formal data was not obtained, these were amongst common issues discussed amongst the SHO cohort. The contributors of the project are current/future GP specialty registrars who were new to Obstetrics and Gynaecology.
- **Time-Based** – considerations were given to time-frame in light of 4-monthly rotations of SHOs. The project idea was conceived mid-June of an April-August rota which allowed approximately a month to turn-around the project.

We first created an initial list of commonly used medications by drug class (e.g. anti-emetic, analgesia). We then created a risk-assessment system based on information from BUMPS (UKTIS, 2022) and BNF (Joint Formulary Committee, 2022) with separate risk-assessments for the pre-natal, Trimester 1/2/3, postnatal periods as follows:

- **Green** = no specific risks pre/during/post pregnancy)
- **Yellow** = minor/theoretical risks. Suitable for SHO prescribing with risk vs benefit consideration
- **Red** = moderate/demonstrated risks, risk vs benefit discussion should be at Registrar/Consultant level
- **Black** = high risk, risk vs benefit discussion should be at Registrar/Consultant level

After compilation of the initial drug list using BUMPS and BNF, we sought expert opinion approval through the speciality pharmacist and Consultant opinion to create the first iteration. We used Venngage to create the guide in a user-friendly manner. The colour code system was translated into diagrams to allow for grayscale printing.

Prior to release of the guide, we collated a pre-intervention questionnaire to assess familiarity of prescriptions. We released the guide through a PDF sent via group-chats and email, and paper copies introduced into key working areas.

After 1 week of circulation, we distributed a post-intervention questionnaire to re-assess familiarity and requesting suggestions for change.

After review of suggestions and wider Consultant opinion, minor additions were made which formed the second iteration of the guide which is currently in circulation at time of writing.

RESULTS

In terms of project deliverables, we have produced two iterations of the Quick Reference Guide (colour and grayscale available) including a pre- and post- intervention questionnaire.

Obstetric Medications Quick Reference									
Antibiotics		Analgesia		Antihypertensive		Laxative		Mood & Misc	
Active		Active		Active		Active		Active	
Amoxycillin (Gentamicin, amikacin, neomycin)		Antispasmodic (mebeverine, peppermint oil)		ACE-inhibitors (Enalapril postnatal)		Bulk Laxatives		Benzodiazepines (Clonazepam, Topiramate)	
Antifungal - azole (Clotrimazole/fluconazole)		Codeine (Oxycodone if breastfed)		ARB		Osmotic Laxative (Lactulose, Macrogel, Gyl Supl)		SSRI	
Cephalosporins (Ceftriaxone/cefazolin/uroline)		Gabapentin		B-blockers (Labetalol, Labetalol/atenolol post-natal)		Stool Softener (Docusate Sodium)		Mirtazapine	
Co-amoxiclav		H2 Antagonist (Famotidine/Fenitidine)		CCB (Nifedipine) (Antidepressant post-natal)		Transcranial Acid		Tramexamic Acid	
Macrolide - erythromycin (Axi-Cam) (Erythromycin)		Hyoscine butylbromide (Buscopan)		Vitamin Supplements (Multivitamin, D, B12, Folate)		Stimulant Laxative (Senna)		Vitamin Supplements (Multivitamin, D, B12, Folate)	
Metronidazole		Morphine/Oxycodone		NSAID		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	
Nitrofurantoin		Paracetamol		PR (Omeprazole)		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	
Penicillins (excluding co-amoxiclav)		PR (Omeprazole)		Sumatriptan		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	
Quinolones - Moxifloxacin (Ciprofloxacin/Oflazoxon)		Sumatriptan		Allergy		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	
Tetracycline - oxyline (Doxylamine/Oxytetracycline)		Allergy		Stimulant Laxative (Senna)		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	
Trimethoprim		Allergy		Stimulant Laxative (Senna)		Stimulant Laxative (Senna)		Steroids (All) (Natal/Infant/Topical/PQ/IV)	

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ANALYSIS

In the pre-intervention cycle, respondents were asked to rate their familiarity with drug prescriptions separated by period (antenatal, Trimester 1/2/3, postnatal) and by medication class (antibiotic, antiemetic, analgesia, allergy, antihypertensive, antidepressant, laxative).

They were asked to rate familiarity as below with numerical values assigned for the purposes of data analysis (Not at all familiar = 1; Extremely familiar = 5):

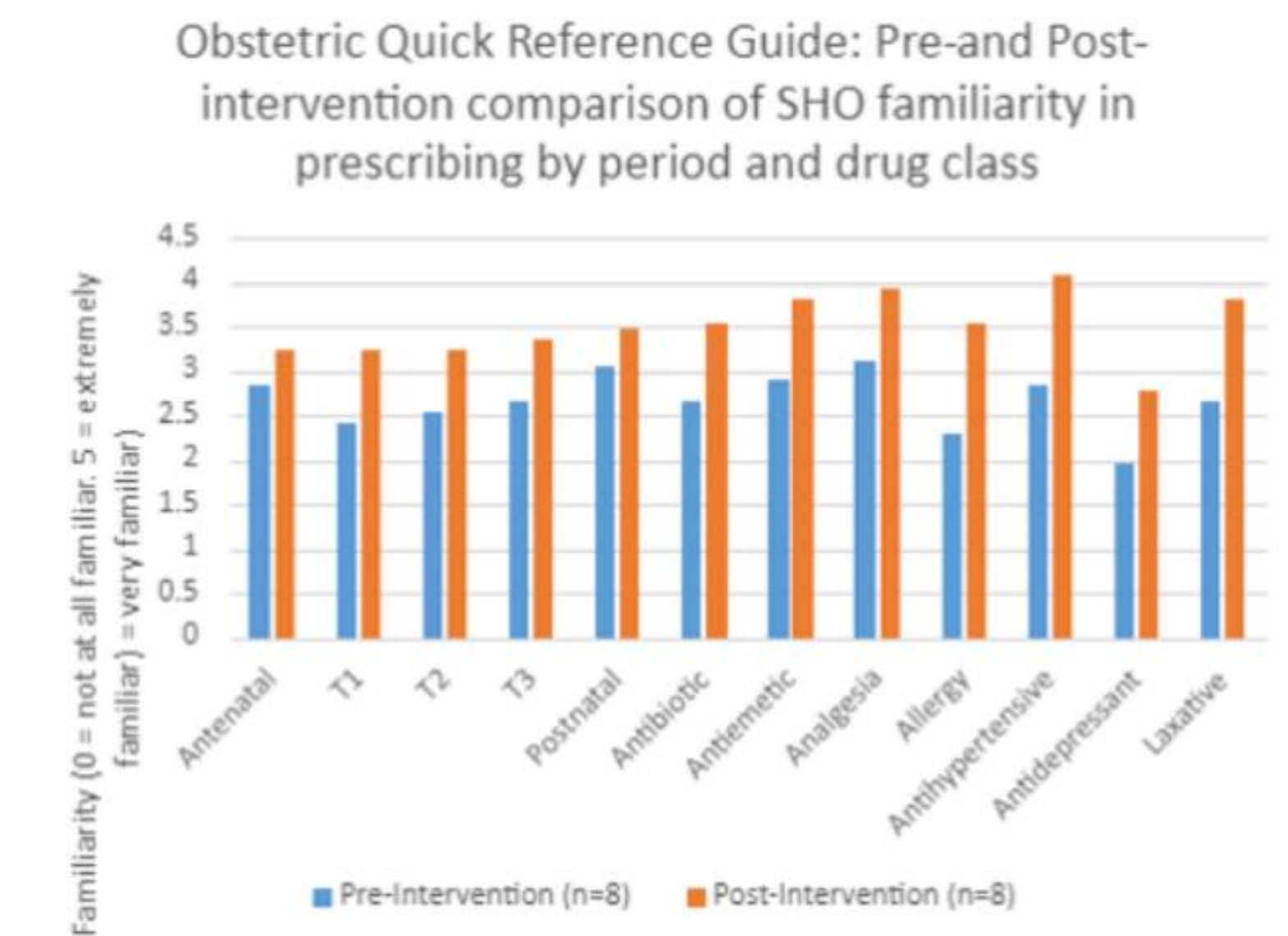
Not at all Familiar	Slightly Familiar	Moderately Familiar	Very Familiar	Extremely Familiar
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After 1 week of introduction of the guide, the post-intervention cycle was distributed and respondents were similarly asked to re-rate familiarity alongside guide usefulness:

Not at all useful	Slightly Useful	Moderately Useful	Very Useful	Extremely Useful
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8 responses were received in both the the pre-and post-intervention cycle (cohort of 14 eligible respondents at SHO grade) representing 57% response rate.

Reviewing familiarity, all respondents reported increased familiarity in all domains following introduction of the reference guide. The greatest changes were seen in the domains of Allergy, Antihypertensives, Antidepressants, Laxatives.



CONCLUSION

This has been a successful project with key deliverables achieved.

As the project team consists primarily of current and future GP Specialty Registrars, part of the project purpose was to create a resource that we could take with us into further GP training to improve options for prescribing in pregnancy.

Moreover, future goals include introduction of the guide into General Practice settings and the wider hospital setting (e.g. A&E, urgent care). If capacity allows, the resource can undergo further QIP cycles and iterations with future cohorts of trainees either in the Obstetrics and Gynaecology setting, or in the aforementioned. Depending on uptake and interest, the resource can also be spread more widely to other hospital trusts as a key aide for safer prescribing in the perinatal period.