**Appendix 2 – Examples of prescribing error and suboptimal prescribing found in the PRACtICe study and 100 prescription study (REVISIT)**

**Right Drug**

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| **Prescribing error** | **Sub-optimal prescribing event** |
| Incorrect drug chosen for clearly documented current clinical requirements. Includes all forms of medication.  *Example: a) Hydrocortisone butyrate cream selected for use on child's face instead of standard hydrocortisone cream. b)Gabapentin prescribed for costochondritis without trying any other possible analgesia including NSAIDs.* | Prescription of a second line antimicrobial therapy according to local antimicrobial guidelines without documentation to explain choice  *Example: Second line H.pylori eradication treatment regimen prescribed.* |
| Incorrect drug prescribed when stepping up or down therapy according to guidelines.  *Example: Clenil started (after salbutamol) as a first line treatment for someone with possible COPD who was awaiting spirometry* | Prescribing a topical medication for an unlicensed indication where the possibility of harm from the product is unknown and alternatives are possible  *Example: Ibuprofen gel for head injury resulting in headache and neck pain without stipulating for neck only and no other analgesic provided or recommended.* |
| Prescription of a medication that is not clinically required and the evidence in the documentation is clear.  *Example: Helicobacter eradication treatment prescribed to a patient who is Helicobacter negative.* | Prescription of an opioid analgesic which is likely to be effective but where a non-opioid would be more appropriate  *Example: Tramadol prescribed as only analgesic for biliary colic. Patient would have been suitable for NSAID* |
| Prescription of a drug in circumstances where an allergy to that drug has been recorded and the prescriber documents no reasonable acknowledgement/justification in the clinical record. | Prescription of a restricted topical antimicrobial agent against local antimicrobial guidelines (but national guidelines suggest prescribed product) *Example: Fusidic acid cream prescribed for impetigo when local guidelines advise topical Polyfax® for small area or oral flucloxacillin.* |
| Prescribing a medication that interacts with a currently prescribed medication and prescribing could and should be avoided and there is no clear and defensible justification. | Failure to prescribe the formulation of a medication recommended by secondary care/specialist although the likelihood of harm or a deleterious effect on the patient is low *Example: Topiramate sprinkles recommended in a neurology letter for migraine as the patient had stopped taking the tablets as they had not suited them. Tablets were prescribed again in consultation with no explanation in the clinical record to explain why the neurology advice had not been followed*. |
| Failure to add a concomitant therapy to that would reduce the risk of harm from the item prescribed *Example: failure to prescribe gastroprotection when prescribing an NSAID to a patient at high risk of GI bleed.* |  |

**Right Dose**

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| **Prescribing Error** | **Sub-optimal prescribing event** |
| Failure to act on a suggested dose change or recommendation from secondary care/specialist correspondence, where that dose change was aimed at either increasing therapeutic benefits or reducing risk of harm. | Prescribing of a medication above the standard recommended dose but at a dosage that is unlikely to cause harm  *Example: Lansoprazole 30mg prescribed for gastro-protection from NSAID. Licensed dose is 15mg and the patient had no other risk factors for gastro-intestinal bleed.* |
| Overdose of an oral medication in a child, e.g. clearly above that recommended by BNF for height/age, unless the medication has extremely low risk of harm. | Prescribing of a medication below the standard recommended dose but at a dosage where risk of harm is low, the risk of treatment failure is low, or the dose is unlikely to cause a deleterious effect on the patient in terms of lack of control of symptoms.  *Example: Calcium tablets prescribed at lower than the recommended dose for osteoporosis.* |
| Overdosage of an oral medication in an adult where there is clear increased risk of harm (unless a clear and defensible justification has been given by the prescriber or in correspondence from secondary care*).*  *Example: Colchicine 1 four times a day for 4-5 days with no maximum dose of 12 tablets per course stated.* | Prescription of a medication at a dosage for a different indication that is unlikely to have a deleterious effect on the patient in terms of effectiveness in treatment. *Example: Prednisolone dose prescribed for exacerbation of COPD at the asthma dosage or vice versa.* |
| Underdosing of oral antimicrobial agents. | Prescribing a dose of antimicrobial agent that is lower than the local guidance but is still within the dose range within the BNF (if the dosage is below that recommended in the BNF then is an error)  *Example: Erythromycin 250mg four times a day in an adult.* |
| Failure to match the dose intended in the consultation notes to the dose prescribed. *Example: Consultation notes state increase dose omeprazole to 40mg. Prescription issued only states omeprazole 20mg once daily.* | Prescribing a strength of medication where more than one dosage unit is needed to supply the required dosage when a higher strength exists. (unless there is an obvious cost-saving motive or clinical reason)  *Example: Estradot® patches 2x25mcg when a 50mcg strength is available.* |
| Failure to titrate or convert opioid medication appropriately and harm may occur.  *Example: converting form codeine to morphine in pregnancy resulting in an unintended dose increase.* | Prescribing medication at a frequency below or higher than that recommended by the BNF/BNFC or SPC so where there is a low potential to cause harm.  *Example: Mild hydrocortisone cream in an adult.* |
| Prescribing the correct medication at the dose for the wrong indication and the dose is likely to cause a deleterious effect on the patient effectiveness of treatment *Example: Aciclovir prescriber at dose for cold sores when treating for shingles.* | Prescription of a very large quantity where there is a low risk of harm and there is a low potential for misuse. |
| Prescribing a drug that interacts with a concomitant drug so that a reduction in dosage should be made but has not been. | Prescribing of antibiotics for a slightly longer duration than the local antimicrobial guidelines. |
| Prescribing medication at a frequency below or higher than that recommended by the BNF/BNFC or SPC so that there is potential to cause harm e.g. steroid cream in a child. |  |

**Right Dose Instructions**

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| **Prescribing error** | **Sub-optimal prescribing event** |
| Oral corticosteroids prescribed “as directed” without further instructions. | Ambiguous or unclear dosing instructions for a medication with a low potential for harm.  *Example: a) Topical preparation prescribed with dosage instructions implying an oral route for administration, e.g. take one twice daily. b) ketoconazole shampoo with no dosage instructions on it (including a child). c) Difflam spray prescribed for a child without directions as to the number of sprays to use. The PIL is not very clear as it states, "spray 1 puff for every 4kg body weight up to a maximum of 4 puffs to the sore area".* |
| Inhaled corticosteroid prescribed without clear dosage instructions, e.g. PRN, BD. | Prescription of a preparation for an adult (with or without the need for an interpreter) that is available OTC and has a low risk of harm (does not include NSAID) is prescribed with “as directed” dosage instructions.  *Example: a) No directions on Lacri-lube® eye ointment in a 15-year-old b) No dose prescribed for spa-tone in a 30-week pregnant woman.* |
| Medication, with significant risk of harm if not taken according to precise dosage instructions, prescribed “as directed” (e.g. amiodarone, betablockers, methotrexate, paracetamol suspension for a child n.b. warfarin not included). | Eye /ear drops for acute infections without the treatment eye/ear stated where the patient is an adult and would be able to remember the treatment eye/ear. |
| Prescription of a topical product with significant potential for harm if dosage instructions are incorrect or not clear, e.g. moderate-potent corticosteroid in a child, or potent corticosteroid in an adult, or products containing antibacterial agents (includes lack of information on duration of use). | Prescription of a topical product with low potential for harm if dosage instructions are incorrect or not clear, e.g. mild corticosteroid in a child, or mild to moderately potent corticosteroid in an adult. |
| Prescription of oral antibiotics without clear dosage instructions, e.g. PRN. |  |
| Eye drops for glaucoma or that contain steroids prescribed without clear directions as to the eye for administration or frequency of use. |  |
| Drops that can be used in more than one route e.g. Eye/ear or eye/ear/nose without specifying where to use them.  *Example: Sofradex® eye/ear drops* |  |
| Strong opioids with inadequate dosage instructions.  *Example: Morphine prescribed with no frequency on the prescription only take 2.5 to 5ml as required* |  |
| Ambiguous or unclear dosing instructions for a medication that can cause significant harm.  *Example: Nortriptyline prescribed as: 2 TABLETS NIGHT/DAY as this could be interpreted as 2 per day or 2 twice a day* |  |
| Eye drops/ear drops for infections without treatment eye/ear stated when multiple carers will be involved. (The panel felt that without the treatment eye stated then there is a reliance on verbal instructions being passed between different carers and therefore a high risk of them being administered incorrectly.  *Example: nursing/care/learning disability home, young child attending nursery, young child/baby seen by GP with Grandparent.* |  |

**Right Follow Up**

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| **Prescribing error** | **Sub-optimal prescribing event** |
| Monitoring not requested.  *Example: a) Not responding to a request from secondary care to undertake laboratory test monitoring where this request is justified in terms of risks from the medication the patient is taking. b) Increasing the dose of an ACE inhibitor/ARB antagonist without checking U&E within three weeks.* | Monitoring not requested.  *Example: Failure to do a digoxin level for a patient who has not had one done for a number of years and whose renal function has reduced but there are no clinical symptoms of overdose.* |
| Prescribing of a long term antimicrobial agent for an active infection without a clinical review.  *Example: Terbinafine for 9 months when only 6 months was required.* |  |

**Right Documentation**

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| **Prescribing error** | **Sub-optimal prescribing event** |
| Prescription of a drug with very high potential for harm without documented evidence of an indication for the drug. | Prescription of any medication (except those with very high potential to cause harm) without documentation of the indication in the medical records (including where the read code in the consultation does not match the medication issued).  *Example: Nasacort issued in a consultation for a three-day history of a cough with no mention of a blocked nose.* |
| Dose conversions for medication that is high risk e.g. opioids at a dose that would appear incorrect but there is not enough documented information to support and clarify the conversion.  *Example: Conversion of Oramorph® to MST® at a dose that is significantly below that expected to provide adequate pain relief without documentation of current usage or supporting reason for the low dosage* | Failure to document the current dose and treatment plan for a patient known to be reducing medication who has been reviewed face to face and for whom further medication supplies have been issued. |
|  | Prescribing medication as a handwritten script e.g. at a home visit and documenting the issue in the clinical notes but not adding the medication to the medication screens on the computer. |
|  | Failure to add or remove sensitivities/allergies from the clinical computer system as they are identified. |
|  | Failure to prescribe concomitant medication but were it is considered that extra advice or assessment could have been given but not documented. *Example: prescribing Betnovate® for hand eczema without current prescription for emollient* |

**Right Review**

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| **Prescribing error** | **Sub-optimal prescribing event** |
| Failing to undertake the required review/discussion on a medication known to be high risk.  *Example: HRT prescribed for a 60-year-old woman. Nil in notes to say continued use and risks had been discussed. Last reviewed 1 year ago so review now due.* | Failing to undertake the required review on a medication where the harm is likely to be low.  *Example: Patient taking Marvelon® with no checks in place for 15 months.* |
| Failure to consider changes to guidelines that mean the patient is on less effective treatment than currently recommended.  *Example: Aspirin prescribed alone for CVA. Nothing in the clinical record regarding aspirin or a discussion regarding switching to clopidogrel as a more effective medication.* | Failure to identify poor adherence to medications before issuing a further supply where the patient was not showing clinical signs of deterioration.  *Example: Patient collecting ICS inhaler regularly but not LABA and no mention of adherence and therefore stepping down or combination inhaler.* |
| Failure to identify poor adherence to medications before issuing a further supply where the risk of harm to the patient is high.  *Example: Child collecting SABA frequently for asthma and requesting further supply but has not been collecting ICS. Prescriber does not address inhaler collections before issuing SABA.* |  |