

## Supplementary file 1

## Evaluating the safety of mental health related prescribing in UK primary care: a cross-sectional study using the Clinical Practice Research Datalink (CPRD)

## Prescribing safety indicators with their operational definitions

No	Prescribing safety indicator	Patients at risk of triggering the prescribing safety indicator (denominator)	Patients triggered the prescribing safety indicator (numerator)
<b>Antipsychotic</b>			
P1	Prescribing antipsychotic with a QT-prolonging drug	Prescribed any antipsychotic within the 6 months leading up to the audit date	Prescribed any QT prolonging drug within the 6 months leading up to the audit date
P2	Risperidone prescribed to a patient with dementia and without psychotic illness for more than 6 weeks	Has a Read code for dementia before the 6 months leading up to the audit date and no read code for psychosis within the 9 months leading up to the audit date and prescribed risperidone within the 6 months leading up to the audit date	Prescribed risperidone for more than 6 weeks within the 6 months leading up to the audit date
P3	Prescribing more than one regular antipsychotic for 3 months or more, excluding clozapine augmentation	Prescribed more than one regular antipsychotic within the 6 months leading up to the audit date	Prescribed more than one regular antipsychotics for 3 months or more within the 6 months leading up to the audit date
P4	Antipsychotic other than quetiapine, aripiprazole or clozapine prescribed to a patient with Parkinson's disease or with Lewy Body Disease	Has a Read code for Parkinson's disease or Lewy Body Disease before the 6 months leading up to the audit date and prescribed any antipsychotic within the 6 months leading up to the audit date	Prescribed antipsychotic other than quetiapine, aripiprazole or clozapine within the 6 months leading up to the audit date
M1	Antipsychotic prescribed for at least 12 months without monitoring glucose, weight, or lipid profile within the previous year	Prescribed any antipsychotic between the 12-24 months leading up to the audit date and again within the 12 months leading up to the audit date	<b>M1a:</b> Have not had glucose test within the 12 months leading up to the audit date <b>M1b:</b> Have not had weight recorded within the 12 months leading up to the audit date <b>M1c:</b> Have not had lipid profile test within the 12 months leading up to the audit date
M2	Initiation of haloperidol without monitoring ECG at baseline	Prescribed haloperidol within the 6 months leading up to the audit date and not prescribed haloperidol in the 6-12 months before the audit date	Have not had ECG monitoring within the 9 months leading up to the audit date
<b>Antidepressant</b>			
P5	Selective serotonin reuptake inhibitor (SSRI) or serotonin and norepinephrine reuptake inhibitor (SNRI) prescribed with an NSAID or antiplatelet agent to a patient without gastrointestinal protection	Prescribed any SSRI or SNRI AND Prescribed antiplatelet or NSAID within the 6 months leading up to the audit date	Not prescribed gastroprotection within the 6 months leading up to the audit date.
P6	SSRI or SNRI prescribed with a direct oral anticoagulant (DOAC) or warfarin	Prescribed SSRI or SNRI within the 6 months leading up to the audit date	Prescribed warfarin or DOAC concurrently with SSRI or SNRI during the quarter Prescribed warfarin or DOAC within the 6 months leading up to the audit date.
P7	Prescribing citalopram, escitalopram, TCA or trazadone with QT-prolonging drugs	Prescribed citalopram, escitalopram, TCA or trazadone within the 6 months leading up to the audit date	Prescribed any QT prolonging drug within the 6 months leading up to the audit date
P8	SSRI or SNRI prescribed to a patient with a history of peptic ulcer or bleeding disorders without gastroprotection	Has a Read code for peptic ulcer or bleeding disorders before the 6 months leading up to the audit date and prescribed SSRI or SNRI within the 6 months leading up to the audit date.	Not prescribed gastroprotection within the 6 months leading up to the audit date
<b>Sedative, hypnotic and anxiolytic Indicators</b>			

<b>P9</b>	Any sedative-hypnotic prescribed to a patient with a history of falls	Has a Read code for falls before the 6 months leading up to the audit date	Prescribed any sedative-hypnotic within the 6 months leading up to the audit date
<b>P10</b>	Benzodiazepine, Z-drug or sedating antihistamine prescribed to a patient with dementia or cognitive impairment	Has a Read code for dementia before the 6 months leading up to the audit date	Prescribed benzodiazepine, Z-drug or sedating antihistamine within the 6 months leading up to the audit date
<b>P11</b>	Benzodiazepine or Z-drug prescribed to a patient aged $\geq 65$ years	Aged $\geq 65$ before the 6 months leading up to the audit date	Prescribed benzodiazepine or Z-drug within the 6 months leading up to the audit date
<b>P12</b>	Benzodiazepine or Z-drug prescribed to a patient with asthma, COPD or sleep apnoea	Has a Read code for asthma, COPD or sleep apnoea before the 6 months leading up to the audit date	Prescribed benzodiazepine or Z-drug within the 6 months leading up to the audit date
<b>Mood stabiliser</b>			
<b>P13</b>	Valproic acid prescribed to a woman of childbearing potential	Female, aged $\geq 15$ before the 6 months leading up to the audit date and $\leq 49$ years before the 6 months leading up to the audit date	Prescribed valproic acid within the 6 months leading up to the audit date
<b>P14</b>	Prescribing lithium with an ACEi/ARB or a diuretic	Prescribed lithium within the 6 months leading up to the audit date	Prescribed ACEi/ARB or a diuretic within the 6 months leading up to the audit date
<b>M3</b>	Prescribing lithium without monitoring lithium plasma levels within the previous 6 months or within the last 3 months if the patient is aged $\geq 65$ years or have a diagnosis of renal impairment or during the first year of treatment	<b>M3a:</b> Prescribed lithium in the 6-12 months leading up to the audit date and again in the 6 months leading up to the audit date	Have not had lithium level testing within the 6 months leading up to the audit date
		<b>M3b:</b> Aged $\geq 65$ before the 6 months leading up to the audit date and prescribed lithium in the 3-6 months leading up to the audit date and again in the 3 months leading up to the audit date	Have not had lithium level testing in the 3 months leading up to the audit date
		<b>M3c:</b> Prescribed in the 3-6 months leading up to the audit date and again in the 3 months leading up to the audit date and NOT prescribed lithium in the 12-18 months leading up to the audit date	Have not had lithium level testing in the 3 months leading up to the audit date
		<b>M3d:</b> Prescribed lithium in the 3-6 months leading up to the audit date and again in the 3 months leading up to the audit date and has a Read code for renal impairment before the 6 months leading up to audit date.	Have not had lithium level testing in the 3 months leading up to the audit date
<b>M4</b>	Lithium prescribed for at least 6 months without monitoring U&Es or thyroid function within the last 6 months	Lithium prescribed in the 6-12 months leading up to the audit date and again within the 6 months leading up to the audit date	<b>M4a:</b> Have not had U&E testing in the 6 months leading up to the audit date <b>M4b:</b> Have not had thyroid function testing in the 6 months leading up to the audit date
<b>Anticholinergic</b>			
<b>P15</b>	A medication with medium/high anticholinergic activity prescribed to a patient with dementia or cognitive impairment	Has a Read code for dementia or cognitive impairment before the 6 months leading up to audit date	Prescribed any medication with medium/high anticholinergic activity within the 6 months leading up to audit date.
<b>P16</b>	Mental health related medication with medium/high anticholinergic activity prescribed with another medication with medium/high anticholinergic activity	Prescribed mental health related medication with medium/high anticholinergic activity before the 6 months leading up to audit date	Prescribed any medication with medium/high anticholinergic activity within the 6 months leading up to audit date.
<b>P17</b>	Mental health related medication with medium/high anticholinergic activity prescribed to a patient with a history of urinary retention or benign prostatic hyperplasia	Has a Read code for urinary retention or benign prostatic hyperplasia before the 6 months leading up to audit date	Prescribed mental health related medication with medium/high anticholinergic activity before the 6 months leading up to audit date
<b>Other</b>			
<b>P18</b>	Four or more psychotropics prescribed to a patient for more than 3 months	Prescribed 4 psychotropics within the 6 months leading up to the audit date	Prescribed 4 or more psychotropics for 3 months within the 6 months leading up to the audit date