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Prescribing of antipsychotic medication in adult mental health services, including high dose, combined, and PRN

QI programme 1h&3e Supplementary audit

Report for

East London NHS Foundation Trust

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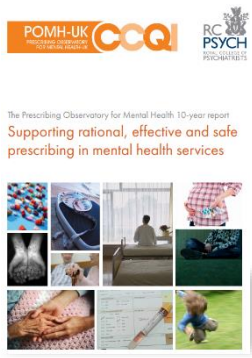
About POMH



The Prescribing Observatory for Mental Health (POMH) runs clinical audit-based quality improvement (QI) programmes that focus on discrete areas of prescribing practice. Membership of POMH is open to all NHS, private and not-for-profit providers of mental health services (NHS Trusts/healthcare organisations) in the UK.

The aim is to help mental health services improve prescribing practice by providing benchmarked information on their performance against evidence-based practice standards.

Those interested in learning more about the role of POMH should visit the website: http://www.rcpsych.ac.uk/pomh. A 10-year report (2016) on the work of POMH and a 15-year anniversary report (2020) are also available on the website.

There are also reviews of the POMH quality improvement methodology in the following publications:

Barnes TRE, Paton C. The role of the Prescribing Observatory for Mental Health (Editorial). British Journal of Psychiatry 2012; 201: 428-429

Barnes TRE, Paton C. Improving prescribing practice in psychiatry. International Review of Psychiatry 2011; 23: 328-335.

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EXECUTIVE SUMMARY ---------- p7

PRACTICE STANDARDS ---------- p7

The standards against which prescribing practice was measured in this QI programme. These practice standards were derived from evidence-based guidelines and agreed by an expert advisory group.

SUMMARY OF KEY FINDINGS ----------p8

This provides an overview of national performance against the practice standards.

INTRODUCTION ----------p15

CLINICAL BACKGROUND ----------p15

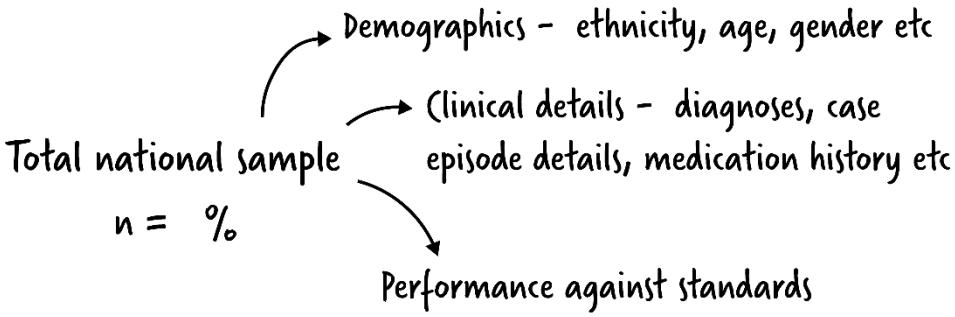
The clinical background to this quality improvement programme

METHOD ----------p19

An outline of the methodology of the quality improvement programme. This includes the nature of the clinical audit data collected and how these were checked.

NATIONAL LEVEL RESULTS ----------p21

The demographic and clinical characteristics of the total national sample are described (TNS). The findings of the data analyses are presented in graphs and tables, primarily to show the extent to which clinical prescribing across the participating services is meeting the practice standards.



These boxes contain suggestions for local QI activity

TRUST LEVEL RESULTS ----------p44

The analyses presented in this section allow Trusts to compare the quality of their local practice, in absolute terms, with the practice standards and, in relative terms, with that of the other, anonymous, participating Trusts.

Each of the benchmarked graphs in this section provides evidence of performance on an aspect of prescribing practice across all Trusts individually and the TNS. In each Figure, the Trust(s) on the left-hand side is closest to meeting the relevant standard while the Trusts on the right are further away from meeting the standard.

TEAM LEVEL RESULTS ----------p54

The Figures in this section allow individual clinical teams in each Trust to compare their practice with each other and against the national data. For each Figure, the team(s) on the left-hand side is closest to meeting the standard. The bar on the far right shows the TNS and the bar next to this shows the overall Trust performance.

The results presented in this report allow you to compare your team's/Trust's practice against:

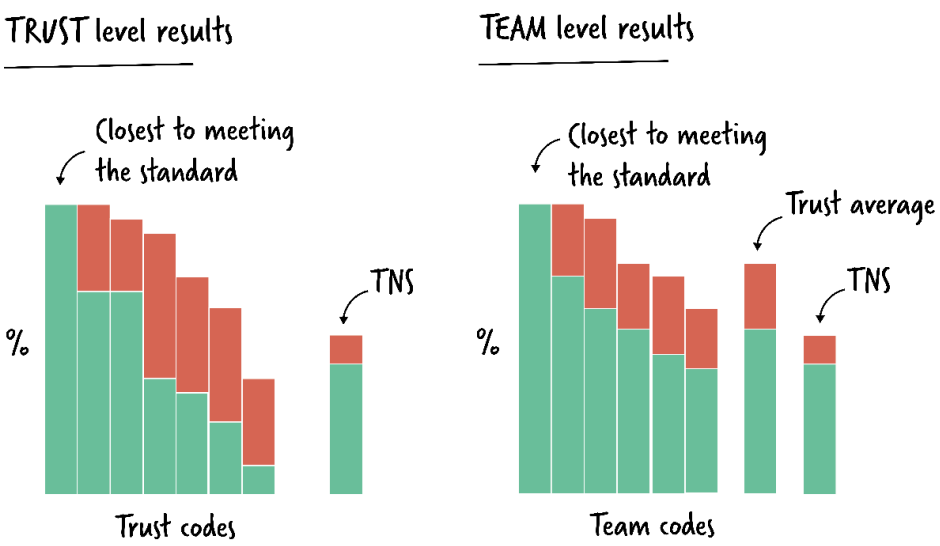
- Treatment recommendations in nationally recognised guidelines, including those published by the National Institute for Health and Care Excellence (NICE) and the British Association for Psychopharmacology (BAP).
- The practice of other participating Trusts.

Further analysis of your Trust's data

An Excel file containing the data submitted by your Trust has been made available to your Local POMH Lead. Please contact this person if you wish to conduct further analyses on your data.

Trust codes

Data from each clinical team or Trust are presented by code only. The POMH Project Team does not know the identity of individual teams. Only the Local POMH Lead for your Trust has the key to team codes for your Trust. You should contact the person if you need to identify data for your own particular team.



Executive summary

This report presents the results of a supplementary audit for a quality improvement programme addressing prescribing of antipsychotic medication in acute adult, complex needs and forensic inpatient settings. This audit addresses the use of regular high-dose and combined antipsychotics as well as PRN psychotropic medications.

The data presented in this report relate only to the current audit. This is because the change in focus to address the quality of prescribing means that the data collected on this occasion are not directly comparable with the previous audits.

During March and April, 62 NHS Trusts/healthcare organisations (See Appendix B) participated in this audit, submitting data for 7759 patients under the care of 683 clinical teams.

Treatment target

	Treatment target
	Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range.

Practice standards

Number	Practice standards
	When regular high-dose or combined antipsychotic medications are prescribed, there should be: • Documentation of the target symptoms/behaviours for such a treatment regimen. • Regular review of the clinical response, including the target symptoms/behaviours. • Monitoring of side effects/tolerability.
	When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be: • A clear description of the symptoms/behaviours for which the PRN medication is indicated. • Specification of the maximum daily dose that can be administered • Regular review of the continuing need for such a prescription

The practice standards and treatment targets were derived from

- Barnes TRE, Drake R, Paton C et al. Evidence-based guidelines for the pharmacological treatment of schizophrenia: updated recommendations from the British Association for Psychopharmacology. Journal of Psychopharmacology 2020, 34;3-78
- National Institute for Health and Care Excellence. Psychosis and schizophrenia in adults: prevention and management, NICE clinical guideline 178, 2014
- Royal College of Psychiatrists (CR190), Consensus statement on high-dose antipsychotic medication. 2014. http://www.rcpsych.ac.uk/files/pdfversion/CR190.pdf

Summary of key findings

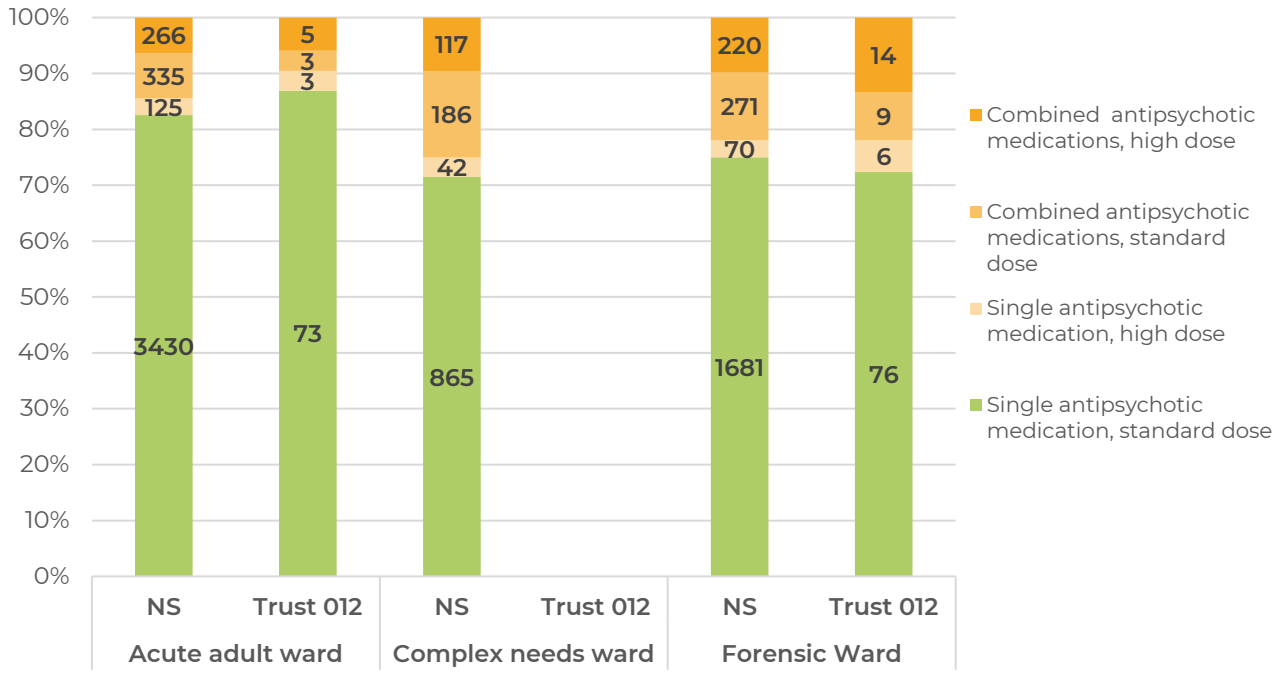
Treatment target *

Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range.

Of the total sample of 7759 patients, 7608 were prescribed regular antipsychotic medication, with the remaining 151 patients prescribed such medication on a PRN basis only.

The Figure below shows that a single antipsychotic in a standard dose was prescribed for the vast majority of cases in each of the national service subsamples. As might be expected, high-dose and combined antipsychotics were rather more likely to be prescribed in complex needs and forensic wards.

Figure 1: Proportion of patients regularly prescribed a single antipsychotic medication or combined antipsychotic medications, calculated as standard or high dose. Your Trust service subsamples and the national service subsamples (NS): acute adult ward (n=4156), complex needs ward (n=1210) and forensic ward (n=2242).



* In some cases, the evidence for practice recommendations falls short of supporting an audit standard, i.e. being applicable in 100% of cases. However, the evidence may be sufficient to support general guidance for good practice, allowing that deviation may be appropriate in a proportion of cases. For such treatment targets, clinicians may be particularly interested in how their practice benchmarks with their peers.

Performance against practice standard 1

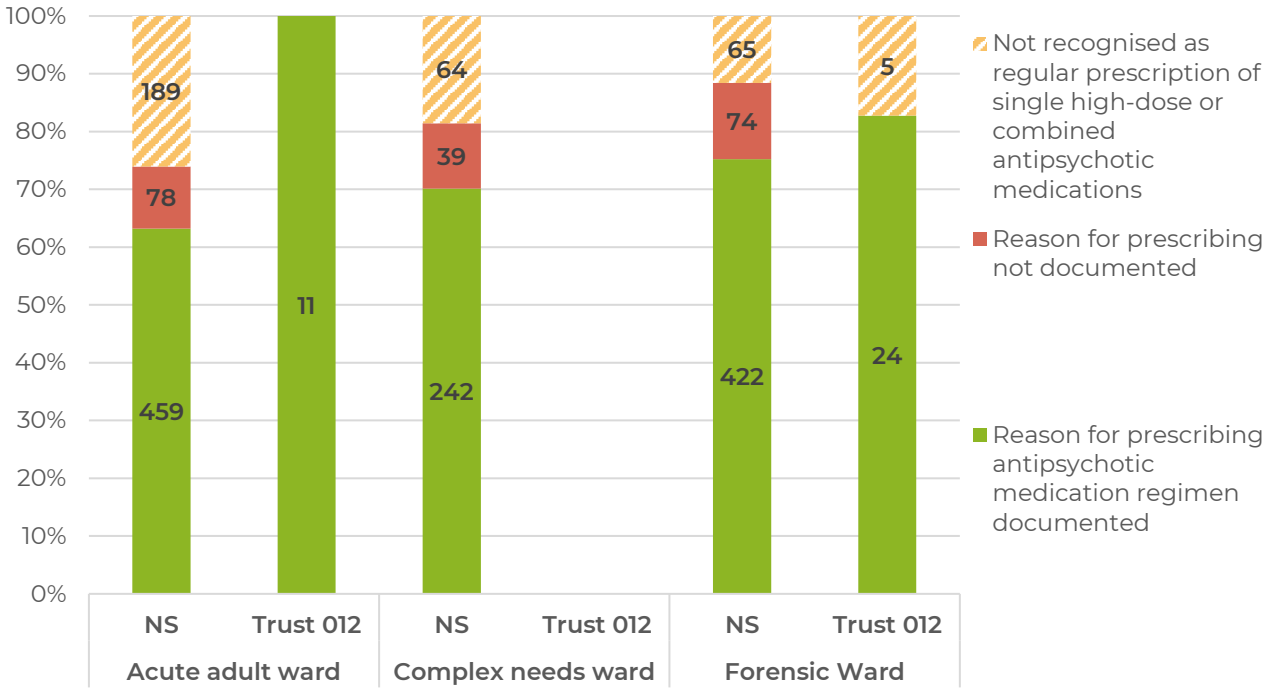
When regular high-dose or combined antipsychotic medications are prescribed, there should be:

- Documentation of the target symptoms/behaviours for such a treatment regimen.
- Regular review of the clinical response, including the target symptoms/behaviours.
- Monitoring of side effects/tolerability.

As indicated in the Figure below, prescriptions for high-dose and/or combined antipsychotics were not always recognised as such in the data collection forms submitted.

Figure 2: Documentation of the clinical reason for prescribing a single antipsychotic medication in high dose or combined antipsychotic medications. Patients with such prescriptions calculated for your Trust service subsamples and the three national service subsamples (NS): acute adult ward (n=726), complex needs ward (n=345), and forensic ward (n=561).

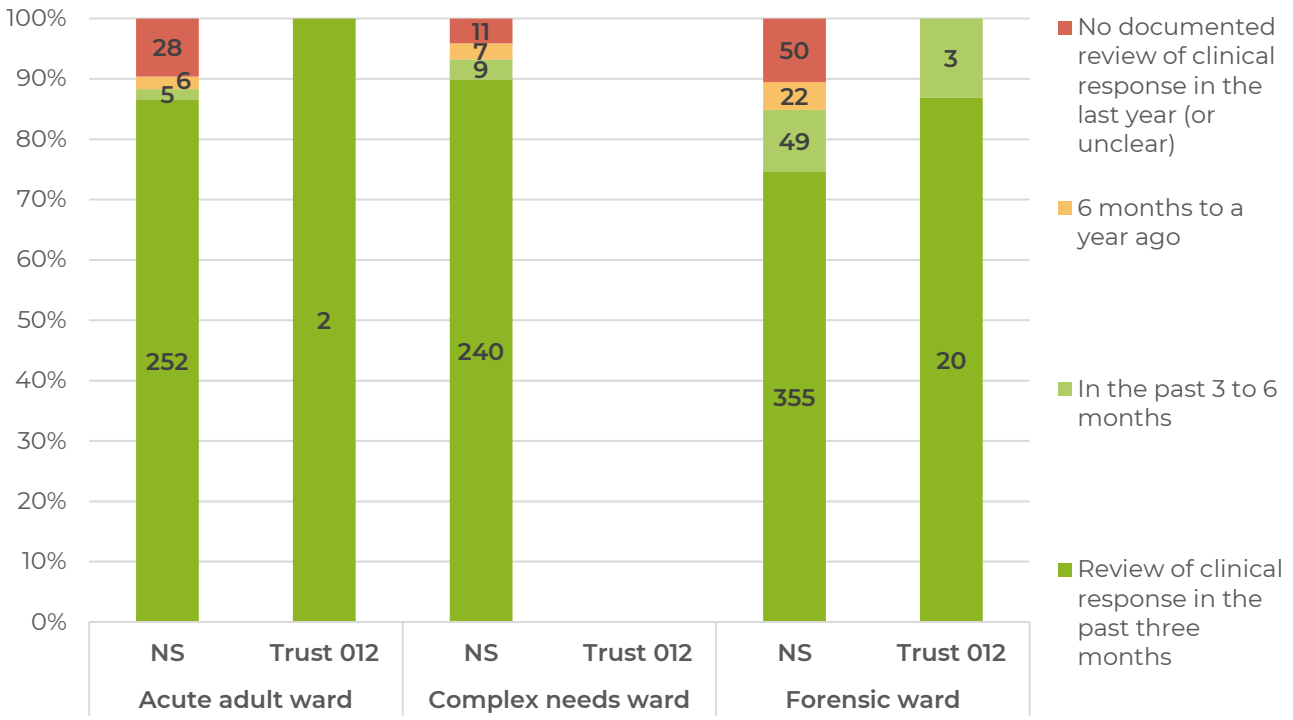
The most commonly documented reasons for a regular prescription of either a single antipsychotic medication in high dose or combined antipsychotic medications may be found in the Figures and Tables on pages 26 to 28.



Depending on the results shown in the Figure above, Trusts may wish to review local policies and protocols that address prescribing of high-dose antipsychotic medication to ensure that the contribution of combinations of regular antipsychotic medication to high dosage regimens is acknowledged, so that such prescriptions prompt the initiation of appropriate monitoring of physical health and mental state.

Where high-dose or combined antipsychotic prescribing was recognised, there was a recent documented clinical review of the treatment regimen in the vast majority of cases overall, although around one in ten patients on an acute adult or forensic ward had not had such a medication review in the past year.

Figure 3: Documentation of the clinical response to the recognised, regular prescription of a single antipsychotic in high dose or combined antipsychotic medications. Patients prescribed such antipsychotic regimens for more than a month in your Trust subsamples and the three national service subsamples (NS): acute adult ward (n=291), complex needs ward (n=267), and forensic ward (n=476).



Where practice has fallen short of this standard, Trusts may like to consider whether the care planning component of their electronic patient record system has a specific field that prompts regular medication review.

Table 1: Physical health measures conducted in the past year in patients prescribed a single antipsychotic medication in high dose or combined antipsychotic medications. Patients recognised as being on such regimens for more than a month in the national subsample (NS: n=1034) and your Trust subsample.

The data in the Table below allow your Trust to look at its relative performance with respect to monitoring key physical health measures such as metabolic parameters and ECGs.

As might be expected in inpatient settings, the physical health checks listed below were documented in the last year for the vast majority of patients who were prescribed high-dose or combined antipsychotics.

Physical health measures	Assessment/measure documented in the past year: n (%)			
	YES		NO	
	NS	Trust 012	NS	Trust 012
Temperature	1002 (97)	25 (100)	32 (3)	-
Pulse	1008 (97)	25 (100)	26 (3)	-
Blood pressure	1008 (97)	25 (100)	26 (3)	-
Body weight/BMI	982 (95)	25 (100)	52 (5)	-
ECG	909 (88)	22 (88)	125 (12)	3 (12)
Examination/assessment for EPS	662 (64)	18 (72)	372 (36)	7 (28)
Full blood count (FBC)	959 (93)	24 (96)	75 (7)	1 (4)
Renal function tests (U&Es)	939 (91)	24 (96)	95 (9)	1 (4)
Liver function tests (LFTs)	938 (91)	24 (96)	96 (9)	1 (4)
Plasma glucose (or HbA1c)	908 (88)	24 (96)	126 (12)	1 (4)
Plasma lipids	903 (87)	24 (96)	131 (13)	1 (4)
Plasma prolactin level	824 (80)	21 (84)	210 (20)	4 (16)
CPK	424 (41)	5 (20)	610 (59)	20 (80)
Use of formal side-effect rating scale/checklist	434 (42)	17 (68)	600 (58)	8 (32)

Performance against practice standard 2

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- A clear description of the symptoms/behaviours for which the PRN medication is indicated.
- Specification of the maximum daily dose that can be administered
- Regular review of the continuing need for such a prescription

In the total national sample, 5607 (72%) patients were prescribed psychotropic medication to be administered on a PRN (pro re nata/ if required) basis. The Figure below shows that the clinical reasons for administering PRN medication were clearly documented in nine cases out of every ten. Such documentation is important as, when the clinical reasons for administering PRN medication are not clearly described, administration is left to the discretion of nursing staff whose understandings of the purpose of such medication may differ from that of the prescriber.

Figure 4: Documentation of the circumstances/clinical reasons for which each oral PRN psychotropic prescription could be administered. All such prescriptions in the national service subsamples, (acute adult ward n=5550, complex needs ward n=1277, and forensic ward n=1968) and your Trust service subsamples.

Those Trusts where the clinical reasons for administering PRN were not clearly documented may like to review their clinical pharmacy screening protocols, to ensure that all prescriptions for oral PRN psychotropic medication that do not clearly specify the reasons/circumstances for use are brought to the attention of the prescriber.

The maximum daily dose of PRN psychotropic medication that could be administered was clearly documented in almost all cases.

Figure 5: Documentation of the maximum daily dose of each oral PRN psychotropic prescription. All such prescriptions in the national subsamples (acute adult ward, n=5550, complex needs n=1277 , and forensic ward n=1968), and your Trust service subsamples.

The Figures below suggest that, compared with acute adult settings, the continuing need for PRN psychotropic medication was more likely to be reviewed for patients in non-acute settings.

Figure 6a: Documented review of the continuing need for an oral PRN psychotropic prescription. Patients on an acute adult ward: national service subsample (n=3828) and your Trust subsample.

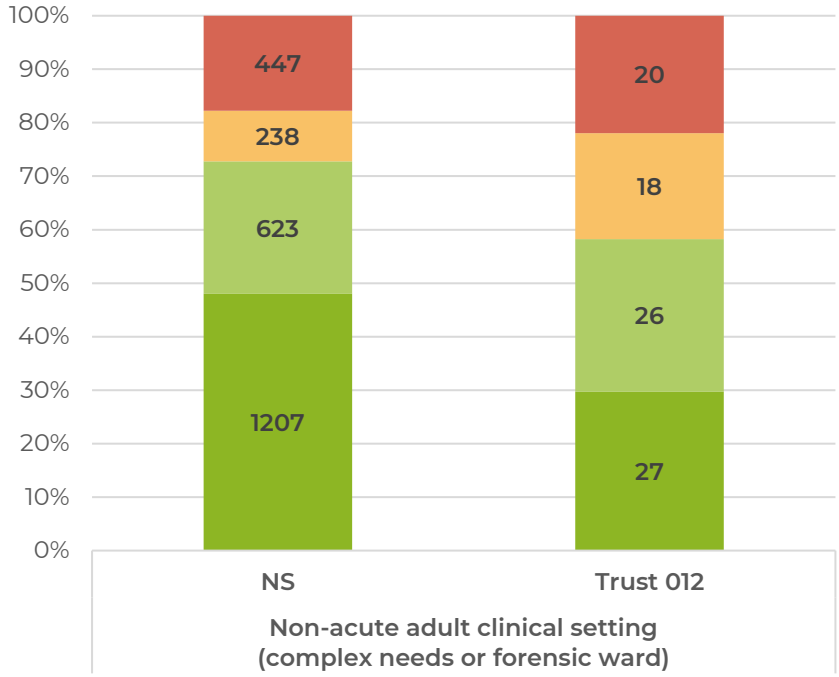


Figure 6b: Documented review of the continuing need for an oral PRN psychotropic prescription. Patients in a non-acute clinical setting: national service subsample (n=2515) and your Trust subsample.

Where practice falls short of the standard, Trusts may like to review their systems for ensuring that prescriptions for oral PRN psychotropic medication are regularly reviewed, and that such reviews are documented. For example, whether it would be helpful if paper prescription charts/electronic prescribing systems included a pre-set time limit for such prescriptions, after which they are no longer valid unless re-authorised by the prescriber.

Introduction

Clinical background

High-dose and combined antipsychotic medication

Each of the licensed antipsychotic medications has a Summary of Product Characteristics (SPC) that outlines the conditions of the marketing authorisation, including a recommended dosage range that has been considered, on the basis of the available evidence, to provide the optimum balance between the desired clinical effect and unwanted side-effects. In other words, a manufacturer's pre-licensing clinical trials programme will have identified, at a population level, a dose for the antipsychotic medication above which there were no further clinical benefits and/or side effects became much more evident.

An antipsychotic medication dosage above the licensed daily maximum is considered a 'high-dose' prescription. If two or more antipsychotic medications are co-prescribed ('antipsychotic polypharmacy'), the percentages of the maximum licensed doses are added together: a cumulative dose of more than 100% is defined as a high dose. While these definitions are essentially arbitrary, the evidence suggests that above these high-dose thresholds the risk-benefit balance becomes more uncertain and potentially unfavourable (Leucht et al., 2020). The Consensus statement on high-dose antipsychotic medication (Royal College of Psychiatrists, 2014) found little convincing evidence that the prescription of doses of antipsychotic medication above the licensed dosage range, and therefore 'off-label', had any therapeutic advantage in any clinical setting, including first-episode psychosis, acute psychotic episode, relapse prevention in schizophrenia, and treatment-resistant schizophrenia. However, there was clear evidence for a greater side-effect burden and the need for appropriate safety/physical health monitoring. Despite this, the use of high-dose and combined antipsychotic medications remains common in psychiatric services in the UK and internationally (Yazici et al., 2017, Tiihonen et al., 2019, Takahashi et al., 2020, Kaikoushi et al., 2021 Burness et al., 2021, Ayenew et al., 2021). The implications for clinical practice are that such regimens should be prescribed as individual therapeutic trials, with close monitoring of target symptoms and potential side effects.

First-episode schizophrenia

Where schizophrenia has shown a poor response to initial antipsychotic treatment, it is not uncommon for clinicians to prescribe higher doses. However, there is no good-quality evidence for any therapeutic advantage with an increased dosage of antipsychotic medication compared with continuing antipsychotic treatment at the same standard dose (Hasan et al., 2013, Dold et al., 2015, Samara et al., 2018).

Relapse prevention

Studies of relapse prevention in schizophrenia have tended to test low-dose and intermittent, targeted treatment strategies rather than high-dosage regimens. However, the consensus is that the recommended dose ranges are optimal for relapse prevention (Marder et al., 2003, Ostuzzi et al., 2022). For example, there is no robust evidence that incremental increases in the dose of antipsychotic medication at times of acute psychotic exacerbation, with subsequent continuation of the new, higher dose, are associated with a lower risk of relapse in the long term (Royal College of Psychiatrists, 2014).

There is some evidence of a possible association between the continued use of combined antipsychotic medications and a reduced likelihood of rehospitalisation (Katona et al., 2014). In a large, 20-year, observational study of all hospital-treated patients with schizophrenia in Finland, antipsychotic combinations, particularly those including clozapine and LAI antipsychotic preparations, were associated with a slightly lower risk of psychiatric rehospitalisation than antipsychotic monotherapy (Tiihonen et al.,

2019). But can any observed reduction in the risk of relapse be directly attributed to the use of combined antipsychotic medications, given the lack of high-quality evidence for their greater efficacy (Galling et al., 2017, Ortiz-Orendain et al., 2018)? For example, could the association be partly explained by better adherence to two co-prescribed antipsychotic medication compared with monotherapy? Further, if particular symptoms were targeted by augmenting the most effective, real-world, monotherapies for relapse prevention (i.e. clozapine and LAI antipsychotic preparations: Tiihonen et al., 2017), with a second antipsychotic, could that have encouraged patients to engage more in their treatment and improve their adherence, leading to fewer relapses?

Treatment-resistant schizophrenia

The Consensus statement on high-dose antipsychotic medication (Royal College of Psychiatrists, 2014) concluded that there was no convincing evidence that high-dose antipsychotic medication is superior to standard dosage for treatment-resistant schizophrenia (Royal College of Psychiatrists 2014). Investigating the threshold dose of antipsychotic medication necessary for all or almost all clinical response, Davis & Chen (2004) analysed the dose-response curves for individual antipsychotic medications, derived from data from randomised clinical trials (RCTs). For all the antipsychotic medications studied, the dose-response curve plateaued at doses higher than the near-maximal effective dose. This was interpreted as evidence that high doses were not more effective, either generally or for treatment-resistant schizophrenia. A similar study, conducted more recently, found that for some antipsychotic medications (e.g. olanzapine, lurasidone, ziprasidone), the dose-response curves did not distinctly plateau, raising the possibility of greater efficacy with higher-than-licensed doses, although this has not been systematically explored in studies (Leucht et al. 2020).

Regarding olanzapine, there has been a long-standing notion that doses above the licensed maximum may be beneficial for treatment-resistant schizophrenia. Several RCTs comparing clozapine and high-dose olanzapine for treatment-resistant schizophrenia have reported equivalent efficacy, prompting Citrome & Kantrowitz (2009) to conclude that high-dose olanzapine may be helpful in treatment-resistant schizophrenia characterised by severe, persistent symptoms and/or acute agitation, although they pointed out that such benefit would need to be balanced against an increased risk of metabolic side effects. A more recent meta-analysis of such RCTs (Souza et al., 2013) found clozapine to be superior to olanzapine, although there was a trend towards higher doses of olanzapine producing greater effect sizes. Thus, while there is robust evidence for superior efficacy for clozapine in treatment-resistant schizophrenia, olanzapine in higher dosage has been suggested as a treatment option warranting consideration.

For a clozapine-resistant illness, a common treatment strategy is to augment clozapine with a second antipsychotic, most commonly amisulpride or aripiprazole in the UK (Prescribing Observatory for Mental Health, 2021). Although endorsed as a treatment strategy worth trying for clozapine-refractory symptoms (Wagner et al., 2020), there is a lack of high-quality evidence of benefit (Wagner et al., 2019, Chakrabati, 2021). RCTs have tested augmentation with amisulpride (Assion et al,. 2008, Barnes et al., 2018), aripiprazole (Srisurapanont et al., 2015), and risperidone (Porcelli et al., 2012). Compared with continuing clozapine monotherapy, no significant benefit has been reported for augmentation with any of these three antipsychotic medications, although the side-effect burden may be greater (Barnes et al., 2018).

PRN antipsychotic medication

The prescription of antipsychotic medication for ‘as required’ (pro re nata or prn) use, usually for the management of disturbed behaviour and agitation in people with psychotic illness, remains embedded in mental health services as standard practice (Geffen et al., 2002, Stein-Parbury et al., 2008, Kaikoushi et al., 2021). Haloperidol is the most popular choice for PRN antipsychotic medication in the UK (Prescribing Observatory for Mental Health, 2008). But the indications for such medication can be overlapping and unclear and there can be uncertainty regarding individual responsibility for the initiation, administration, and review of such treatment as well as the monitoring and documentation of a patient’s response and any adverse effects (Usher & Luck 2004, Baker et al., 2007, Stein-Parbury et al., 2008, Burk et al., 2020).

Although there is some evidence to support the use of antipsychotic medication in managing acute behavioural disturbance and aggression (van Schalwyk et al., 2018), the RCTs that have demonstrated this effect have focussed on the use of antipsychotic monotherapy or antipsychotic medication in combination with a benzodiazepine or other sedative drug (TREC Collaborative Group, 2003, Alexander et al. 2004). The prescription of PRN antipsychotic medication for patients already receiving regular antipsychotic medication is not supported by high-quality evidence. A systematic review of PRN medication for 'seriously mentally ill people in hospital' failed to find any trials that had compared 'as required' prescriptions with regular medication (Douglas-Hall & Whicher 2015).

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Method

A clinical records audit was conducted for patients prescribed antipsychotic medication as inpatients, under the care of adult mental health services. A questionnaire/audit tool was sent out to all Trusts/healthcare organisations with instructions that copies should be made available to allow clinical teams to audit prescribing practice for a sample of patients who were currently being treated with antipsychotic medication (See Appendix D).

Submission of data

Each Trust was allocated a code number that was known only to the Trust and POMH. Trusts were asked to allocate codes to participating services and eligible patients and, if they wished to, individual consultants. The key to these codes is held by the Trust and is not known to POMH. Data coded in this way were entered onto an internet-based form and submitted to POMH via a secure website.

Ownership of data submitted to POMH is retained by the Trust that provided it. See Appendix A for further information on data ownership.

Data collection

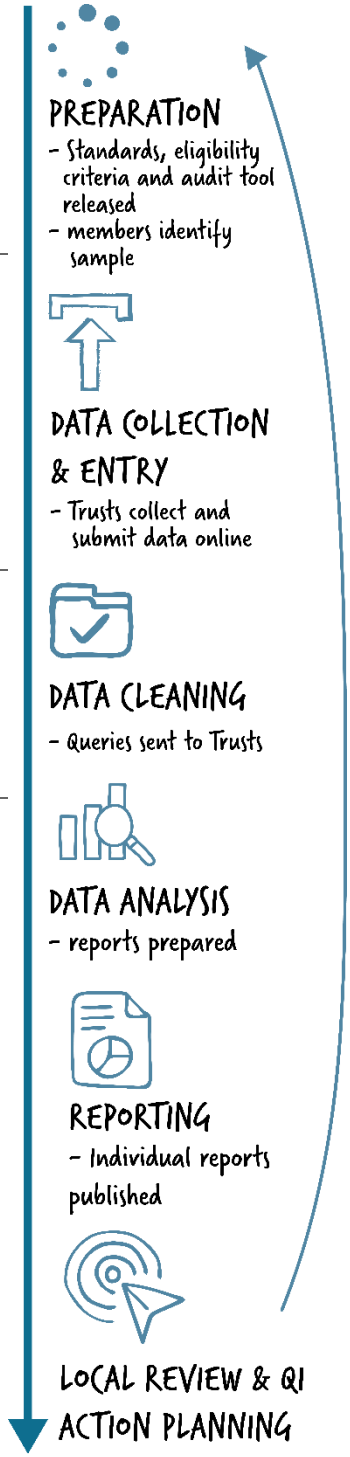
A copy of the data collection tool used for this audit can be found in Appendix D.

All Trusts and clinical teams were self-selected in that they chose to participate. All the participating Trusts/healthcare organisations are listed alphabetically in Appendix B.

Data cleaning

Data were collected using FORMIC (electronic survey software).

Data were cleaned to correct instances of obvious data entry error. Details of corrections are held on file by POMH; please contact pomh-uk@rcpsych.ac.uk if you wish to examine these.



Data analysis

As in previous reports, the data were analysed at three levels:

1) **National level.** This section describes the demographic and clinical characteristics of patients in the total national sample. The data relating to prescribing practice were analysed in a variety of ways to facilitate understanding of the national picture and stimulate discussion in participating clinical teams.
2) **Trust level.** The analyses conducted on the national data were repeated for each Trust/healthcare organisation that submitted audit data. This allows Trusts to compare their performance against the practice standards with the performance of the other, anonymous, participating Trusts.
3) **Clinical service level.** This analysis allows Trusts and individual clinical teams to compare their practice with each other and against the national data.

All the Figures presented are rounded up (no decimal places) for simplicity, so in some of the Tables and Figures in the report the total percentages may add up to 99% or 101%.

The POMH Lead for each participating Trust will be sent an Excel dataset containing their Trust's data. This allows Trusts to analyse their local data further, should they wish to do so.

National level results

This section includes the demographic and clinical characteristics of the total national audit sample.

The findings of the data analyses are presented in Figures and Tables, primarily to show the extent to which clinical prescribing across the participating services is meeting the practice standards.

62 Trusts/healthcare organisations submitted data on the treatment of 7759 patients who were prescribed antipsychotic medication as inpatients, under the care of adult mental health services.

Demographic and clinical characteristics

Two thirds of the total national sample were male but this proportion varied across the 3 service subsamples, being highest in the forensic subsample. In the three service subsamples, the median ages were similar, ranging from 39 to 41 years. As might be expected, in adult mental health services, very few patients were 18 years of age or younger and only one in twenty was older than 65 years.

Table 2: Demographic characteristics. Total national sample (n=7759) and three service subsamples: acute adult ward (n=4244), complex needs ward (n=1238), and forensic ward (n=2277).

Key demographic variables			Acute adult inpatient / PICU ward	Complex needs ward	Forensic ward team	TNS
			n=4244	n=1238	n=2277	n=7759
			n (%)	n (%)	n (%)	n (%)
Sex	Male		2362 (56)	834 (67)	1948 (86)	5144 (66)
	Female		1882 (44)	404 (33)	329 (14)	2615 (34)
Age in years	Median age		41	41	39	40
	Age range		17 - 99	18 - 86	16 - 83	16 - 99
	Age bands	18 or younger	12 (<1)	2 (<1)	4 (<1)	18 (<1)
		19 to 25	606 (14)	162 (13)	186 (8)	954 (12)
		26 to 35	1037 (24)	295 (24)	707 (31)	2039 (26)
		36 to 45	859 (20)	293 (24)	677 (30)	1829 (24)
		46 to 55	748 (18)	232 (19)	436 (19)	1416 (18)
		56 to 65	712 (17)	187 (15)	217 (10)	1116 (14)
		over 65	270 (6)	67 (5)	50 (2)	387 (5)
Ethnicity	White/White British		3004 (71)	916 (74)	1554 (68)	5474 (71)
	Black/Black British		473 (11)	138 (11)	346 (15)	957 (12)
	Asian/Asian British		322 (8)	90 (7)	156 (7)	568 (7)
	Mixed		131 (3)	37 (3)	118 (5)	286 (4)
	Other		93 (2)	26 (2)	50 (2)	169 (2)
	Unknown/not documented		221 (5)	31 (3)	53 (2)	305 (4)

As might be expected in an audit examining the use of antipsychotic medication, two out of every three patients in the total national sample had a diagnosis of a schizophrenia spectrum disorder and a further one in six an affective disorder. One patient in four had more than one psychiatric diagnosis and such clinical complexity was reported more often in the forensic and complex needs subsamples than in the acute adult subsample.

Four patients out of every five in the total national sample were detained under the Mental Health Act, with the treatment plan for just over half of these detained patients requiring approval from a Second Opinion Appointed Doctor (SOAD). The profiles of these characteristics within the three clinical service subsamples are consistent with clinical expectations.

Table 3: Clinical characteristics. Total national sample (n=7759) and three service subsamples: acute adult ward (n=4244), complex needs ward (n=1238), and forensic ward (n=2277).

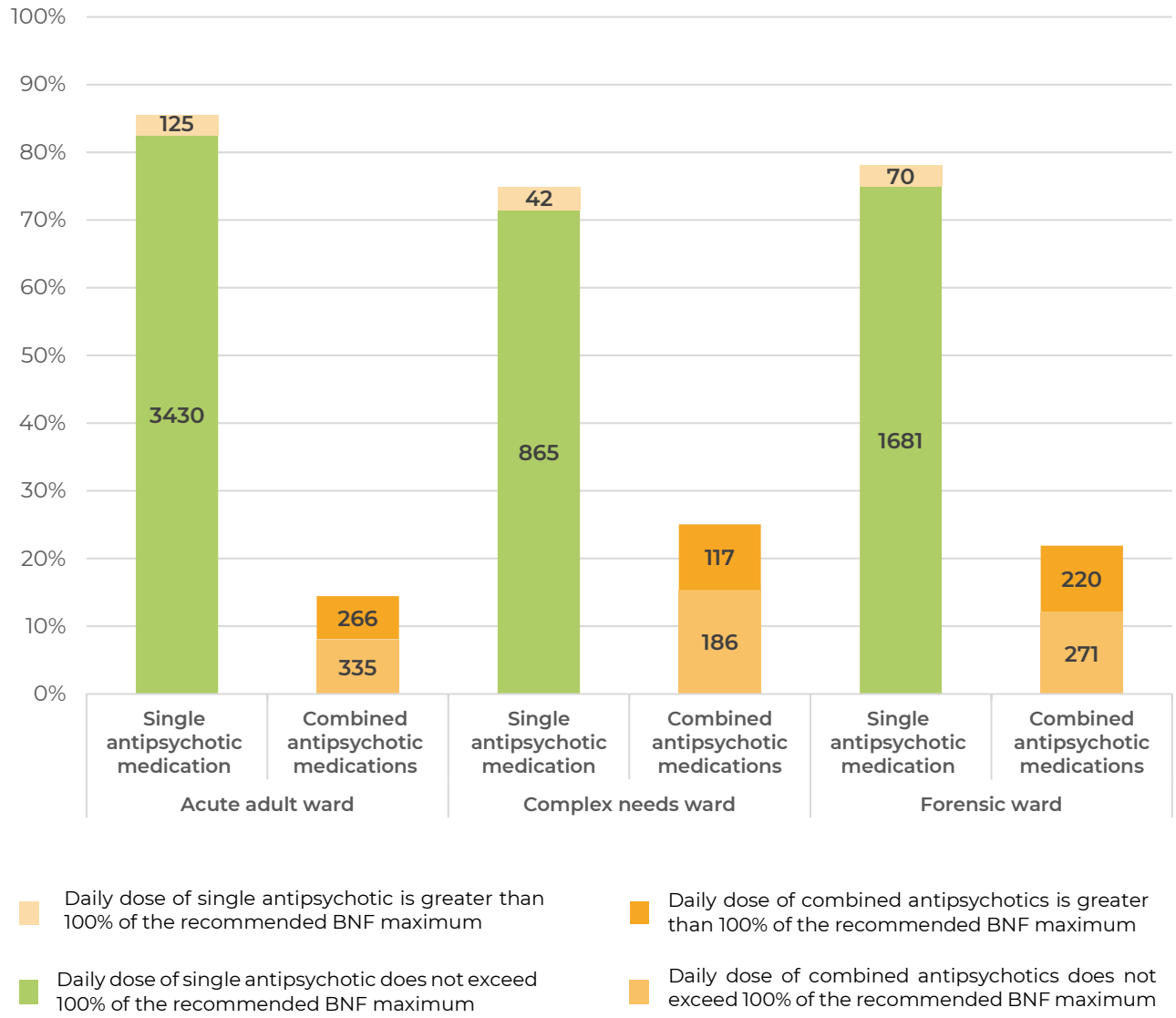
Key clinical characteristics		Acute adult inpatient / PICU ward	Complex needs ward	Forensic ward	TNS
		n=4244	n=1238	n=2277	n=7759
		n (%)	n (%)	n (%)	n (%)
Psychiatric diagnoses (ICD-10)					
Organic, including symptomatic, mental disorders (F00-F09)		66 (2)	52 (4)	38 (2)	156 (2)
Mental and behavioural disorders due to psychoactive substance use (F10-F19)		439 (10)	105 (8)	277 (12)	821 (11)
Schizophrenia, schizotypal, delusional disorders and other non-mood psychotic disorders (F20-F29)		2405 (57)	860 (69)	1735 (76)	5000 (64)
Bipolar disorder (F31)		525 (12)	55 (4)	73 (3)	653 (8)
Affective disorder, other than bipolar disorder (F30-F39)		470 (11)	108 (9)	104 (5)	682 (9)
Anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders (F40-F48)		266 (6)	50 (4)	68 (3)	384 (5)
Behavioural syndrome associated with physiological disturbance and physical factors (F50-F59)		46 (1)	11 (1)	6 (<1)	63 (1)
Borderline/emotionally unstable personality disorder (F60.3)		397 (9)	117 (9)	259 (11)	773 (10)
Personality disorder other than borderline/emotionally unstable personality disorder (F60-F69)		168 (4)	76 (6)	362 (16)	606 (8)
Intellectual disabilities (F70-F79)		84 (2)	63 (5)	185 (8)	332 (4)
Disorder of psychological development (F80-F89)		90 (2)	69 (6)	113 (5)	272 (4)
Behavioural and emotional disorder with onset occurring in early childhood and adolescence (F90-F98)		41 (1)	20 (2)	52 (2)	113 (1)
Mental disorder not otherwise specified (F99)		57 (1)	5 (<1)	-	62 (1)
	Single psychiatric diagnosis	3290 (78)	914 (74)	1415 (62)	5619 (72)
	Two psychiatric diagnoses	633 (15)	246 (20)	550 (24)	1429 (18)
	Three or more psychiatric diagnoses	157 (4)	58 (5)	239 (10)	454 (6)
	None of the above diagnoses documented	65 (2)	10 (1)	7 (<1)	82 (1)
	Not known/not documented	99 (2)	10 (1)	66 (3)	175 (2)
Mental Health Act status					
Informal		1191 (28)	304 (25)	19 (1)	1514 (20)
Formal	Not subject to CTL.	1716 (56)	67 (7)	127 (6)	1910 (31)
	Subject to CTL. Patient consents. English section 58 (form T2) or Scottish or Irish equivalent.	561 (18)	383 (41)	1189 (53)	2133 (34)
	Subject to CTL. Patient does not or cannot consent. English section 58 (form T3) or Scottish or Irish equivalent.	670 (22)	464 (50)	899 (40)	2033 (33)
	Receiving treatment that requires consent and a second opinion. English section 57 or Scottish or Irish equivalent.	106 (3)	20 (2)	43 (2)	169 (3)
Total number of detained patients		3053	934	2258	6245

Treatment target

Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range.

7608 (98%) of the patients in the total national sample were prescribed regular antipsychotic medication and the Figure below shows that this was a single antipsychotic in a standard dose in almost four-fifths of these cases. A single antipsychotic in a high dose was prescribed for fewer than one patient in every thirty but where a combination of antipsychotics was prescribed this resulted in a high dose in just over four cases in every ten.

Figure 7: Proportion of patients regularly prescribed a single antipsychotic medication or combined antipsychotic medications, calculated as high dose. Three service subsamples: acute adult ward (n=4156), complex needs ward (n=1210), and forensic ward (n=2242).



The single antipsychotic medications most commonly prescribed in a high dose were olanzapine (n=89; 38%), aripiprazole (n=52; 22%) and quetiapine (n=44; 19%). While there are some limited data on which to base an individual treatment trial of high-dose olanzapine (Souza et al, 2013), there are no such data for quetiapine. With respect to aripiprazole, its mechanism of action as a D_2 partial agonist along with its very high affinity for D_2 receptors (Miyamoto et al, 2005) and an established bell-shaped dose response curve that demonstrates maximum therapeutic benefits at a dose of 10-15 mg daily (50% of the licensed maximum dose; Leucht et al, 2020) suggest that an individual treatment trial of a high dose of this medication is not underpinned by any established pharmacological rationale and is unlikely to yield additional clinical benefits.

Trusts may wish to review local policies and protocols that address prescribing of high-dose antipsychotic medication to ensure that the contribution of combinations of regular antipsychotic medication to high dosage regimens is acknowledged and that such prescriptions prompt the initiation of appropriate monitoring of physical health and mental state.

Medicines management committees may wish to review local practice with respect to the prescribing of high doses of aripiprazole and, where such prescribing is evident, to draw attention to the mode of action of this medication and its bell-shaped dose response curve.

Table 4: Other psychotropic medication prescribed with a regular antipsychotic.
National subsample (n=7608).

Other psychotropic medication was commonly co-prescribed with regular antipsychotic medication, the most common being an antidepressant, a benzodiazepine and valproate. Patients prescribed combined antipsychotic medication were slightly more likely to have other psychotropic medication co-prescribed, which would suggest they had more complex/severe illness.

	Single antipsychotic in a standard dose	Single antipsychotic in a high dose	Combined antipsychotics
	n=5976	n=237	n=1395
	n (%)	n (%)	n (%)
An antidepressant	1876 (31)	54 (23)	416 (30)
A benzodiazepine	1521 (25)	83 (35)	457 (33)
Valproate	1078 (18)	60 (25)	392 (28)
An anticholinergic	919 (15)	27 (11)	371 (27)
Lithium	418 (7)	12 (5)	158 (11)
Promethazine	402 (7)	15 (6)	107 (8)
Lamotrigine	285 (5)	14 (6)	106 (8)
Carbamazepine	41 (1)	6 (3)	19 (1)
None of the above	1849 (31)	69 (29)	279 (20)

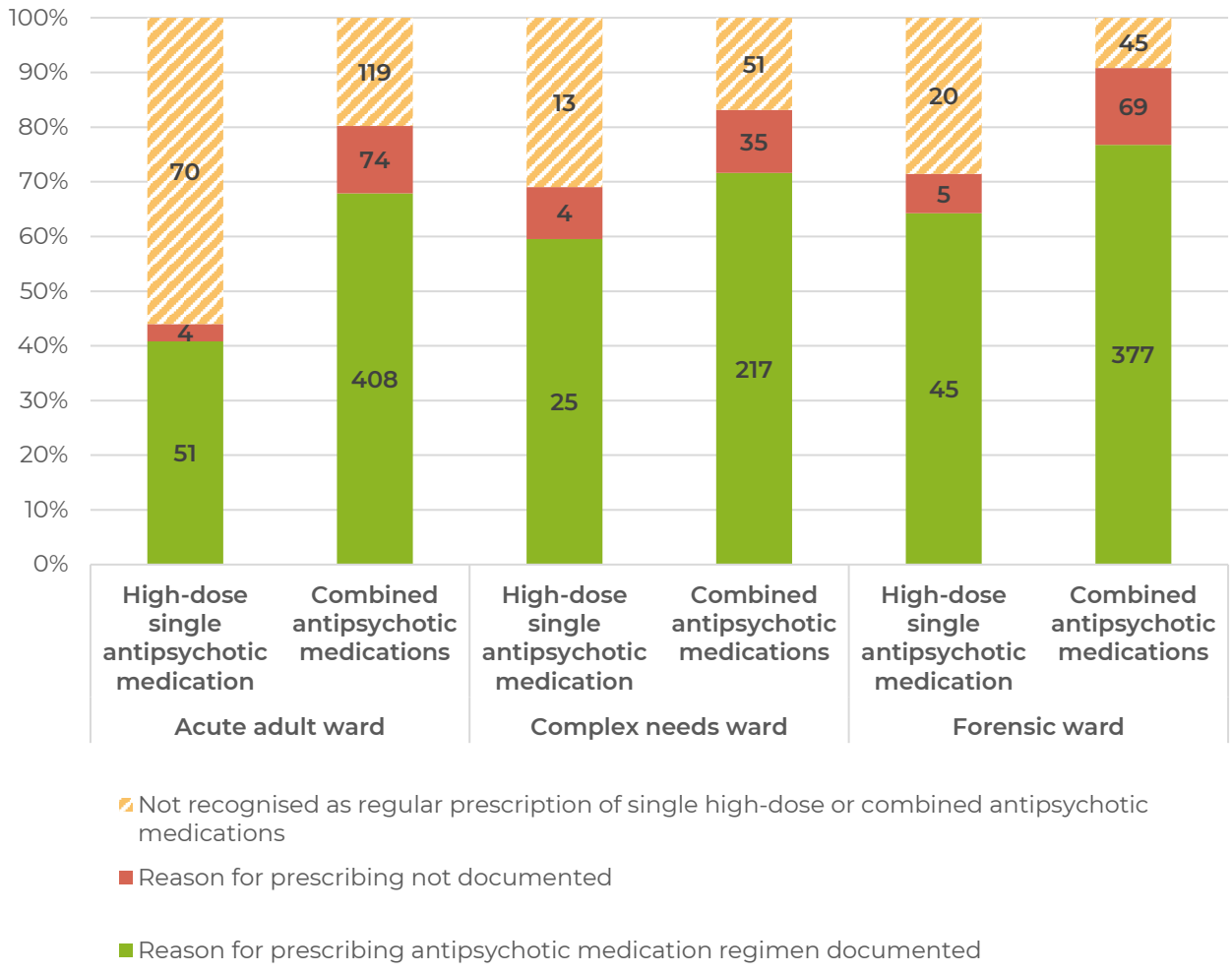
Performance against practice standard 1

When regular high-dose or combined antipsychotic medications are prescribed, there should be:

- **Documentation of the target symptoms/behaviours for such a treatment regimen.**
- Regular review of the clinical response, including the target symptoms/behaviours.
- Monitoring of side effects/tolerability.

Figure 7 on page 23 shows that in the total national sample, 237 patients were regularly prescribed a single antipsychotic in a high dose and 1395 patients were regularly prescribed more than one antipsychotic medication. However, according to the audit data submitted, a single antipsychotic prescribed in a high dose was only correctly recognised as such in 57% (n=134) of cases while the prescription of more than one regular antipsychotic medication was correctly recognised as such in 85% (n=1180) of cases. The data presented in Figure 8 includes the proportion of cases for which high dose or combined antipsychotic prescribing was not correctly recognised in each of the three clinical subsamples. The data in Figure 9 and Tables 5 and 6 relate only to the recognised prescriptions for high-dose and combined antipsychotics.

Figure 8: Documentation of the clinical reason for prescribing a single antipsychotic medication in high dose or combined antipsychotic medications. Patients with such prescriptions calculated for the three subsamples: acute adult ward (n=726), complex needs ward (n=345), and forensic ward (n=561).



Clinical reasons for prescribing high-dose/combined antipsychotic medication

Tables 5 and 6 below show the clinical reasons for prescribing a high dose of a single antipsychotic or a combination of antipsychotics that did not include clozapine (combinations that included clozapine are shown on page 28).

As might be expected, poorly controlled psychotic symptoms and behavioural disturbance were the clinical targets in the vast majority of cases. The process of switching antipsychotic medications was identified as the reason for high dose/combined antipsychotics in a small proportion of cases; it might be expected that such prescriptions would be short-term.

Table 5: Regular prescription of a single antipsychotic medication in a high dose: most common clinical reasons and the antipsychotic medications most prescribed. Patients prescribed high-dose antipsychotic monotherapy (n=134).

Most common clinical reasons for a regular prescription of a single antipsychotic medication in a high-dose		Antipsychotic medications most commonly prescribed
n=134	n (%)	(number of prescriptions)
Insufficient response in terms of symptoms and/or behavioural disturbance with antipsychotic monotherapy at standard dosage	95 (71)	olanzapine (62) aripiprazole (8) paliperidone (6)
Management of persistent verbal or physical aggression towards others (including staff or towards property)	29 (22)	olanzapine (18) paliperidone (4) haloperidol/zuclopenthixol (2)
Poor relapse prevention at standard dose	25 (19)	olanzapine (19) quetiapine (2)
Initiation of depot regimen	14 (10)	aripiprazole (12) haloperidol (2)
Reason not documented	13 (10)	olanzapine (7) aripiprazole (3)

The single antipsychotic most often prescribed in a high dose was olanzapine. Such a strategy may be justifiable as an individual treatment trial under some clinical circumstances. For example, compared with patients who do not smoke tobacco, those who do can have much lower plasma levels of olanzapine at any given dose due to induction of CYP1A2 (the hepatic enzyme that metabolises olanzapine) by the hydrocarbons in tobacco smoke (Tsuda et al, 2014). Thus, smokers may require a higher dose of this medication than non-smokers. There is also some limited evidence in the literature that doses of olanzapine that are higher than the licensed maximum may confer modest additional benefits for some patients (Souza et al, 2013).

Table 6: Regular prescription of combined antipsychotic medications (not including clozapine): most common clinical reasons and the antipsychotic medications most prescribed. Patients prescribed combined antipsychotic medications other than clozapine (n=738).

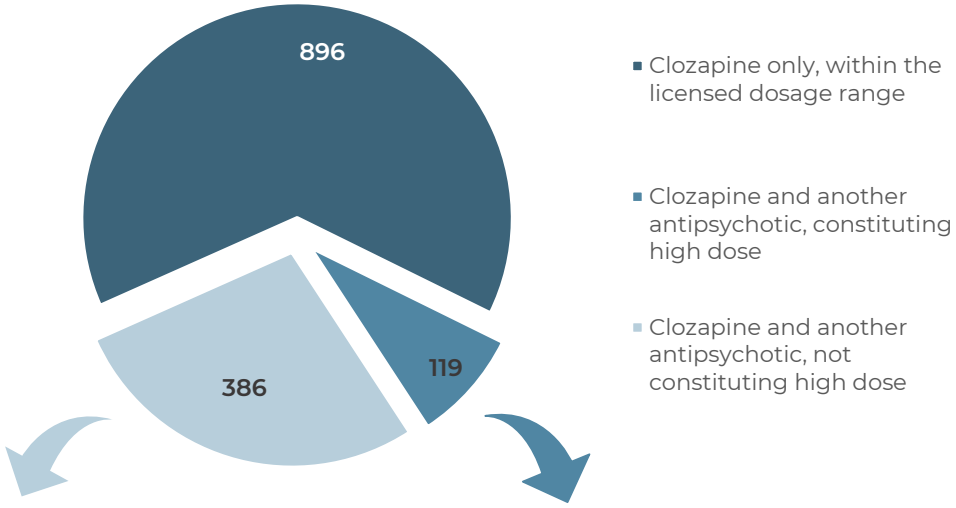
The reason for prescribing combined antipsychotic medication (not including clozapine) was documented in the clinical records in nine cases out of every ten. The most common reason for such prescriptions was to improve symptomatic control and olanzapine was most often part of such regimens. As might be expected, where the reason for combining antipsychotic medications was to minimise prolactin elevation, aripiprazole was almost always prescribed.

Most common clinical reasons for a regular prescription of combined antipsychotic medications (not including clozapine)		Antipsychotic medications most commonly prescribed as part of combination
n=738	n (%)	(number of prescriptions)
Insufficient response of symptoms and/or behavioural disturbance or poor relapse prevention with antipsychotic monotherapy at a dose within BNF limits	384 (52)	olanzapine (188) zuclopenthixol (115) aripiprazole (101)
Management of persistent verbal or physical aggression towards others (including staff or towards property)	110 (15)	olanzapine (50) zuclopenthixol (40) haloperidol (28)
Minimise prolactin elevation	103 (14)	aripiprazole (98) zuclopenthixol (25) paliperidone (23)
Period of cross-over for 6 weeks or less while switching from one drug to another	101 (14)	risperidone (40) olanzapine (39) paliperidone (29)
Insufficient response of symptoms and/or behavioural disturbance or poor relapse prevention with antipsychotic monotherapy at a high dose (i.e. above BNF maximum)	90 (12)	olanzapine (57) zuclopenthixol (23) haloperidol (19)
Reason not documented	90 (12)	olanzapine (35) aripiprazole (28) quetiapine (23)

Clozapine co-prescribed with a second antipsychotic medication

Where a combination of antipsychotic medications was regularly prescribed, the combination included clozapine in 505 (36%) cases and for almost one in four of these cases, the combination resulted in a high dose. The antipsychotic medications most commonly used to augment clozapine, along with the doses used, are shown below.

Figure 9: Proportion of patients prescribed clozapine as monotherapy or combined with another antipsychotic medication, in high dose. Patients prescribed clozapine (n=1406).



NOT CONSTITUTING A HIGH-DOSE REGIMEN		
The four most commonly prescribed antipsychotic medications to augment clozapine		
	n (%)	**Median oral dose mg /day**
aripiprazole	129 (33)	10
amisulpride	120 (31)	400
haloperidol	34 (9)	5
risperidone	27 (7)	4

CONSTITUTING A HIGH-DOSE REGIMEN		
The four most commonly prescribed antipsychotic medications to augment clozapine		
	n (%)	**Median oral dose mg /day**
aripiprazole	47 (39)	20
amisulpride	37 (31)	800
olanzapine	9 (8)	20
risperidone	8 (7)	6

Most common clinical reasons for prescribing	**n (%)**
n=386	
Insufficient response to clozapine monotherapy	195 (51)
Reason not documented	60 (16)
Minimise metabolic or other side effects	56 (15)
Period of cross-over for 6 weeks or less while switching to or from clozapine	33 (9)
Management of persistent aggression to self or others	25 (6)

Most common clinical reasons for prescribing	**n (%)**
N=119	
Insufficient response to clozapine monotherapy	75 (63)
Reason not documented	24 (20)
Management of persistent aggression to self or others	22 (18)
Minimise metabolic or other side effects	12 (10)
Period of cross-over for 6 weeks or less while switching to or from clozapine	3 (3)

Augmentation of clozapine with a second antipsychotic is a recognised treatment strategy where clozapine alone does not provide sufficient control of symptoms (NICE, 2014; Barnes et al, 2020). However, the effect size of this intervention is modest, at best, and there is uncertainty about the risk-benefit balance (Barnes et al, 2020). The Figure above shows that, in this audit sample, the doses of antipsychotic medication used to augment clozapine were greater where the combination constituted a high-dose regimen, and often greater than the doses formally tested in clozapine augmentation studies.

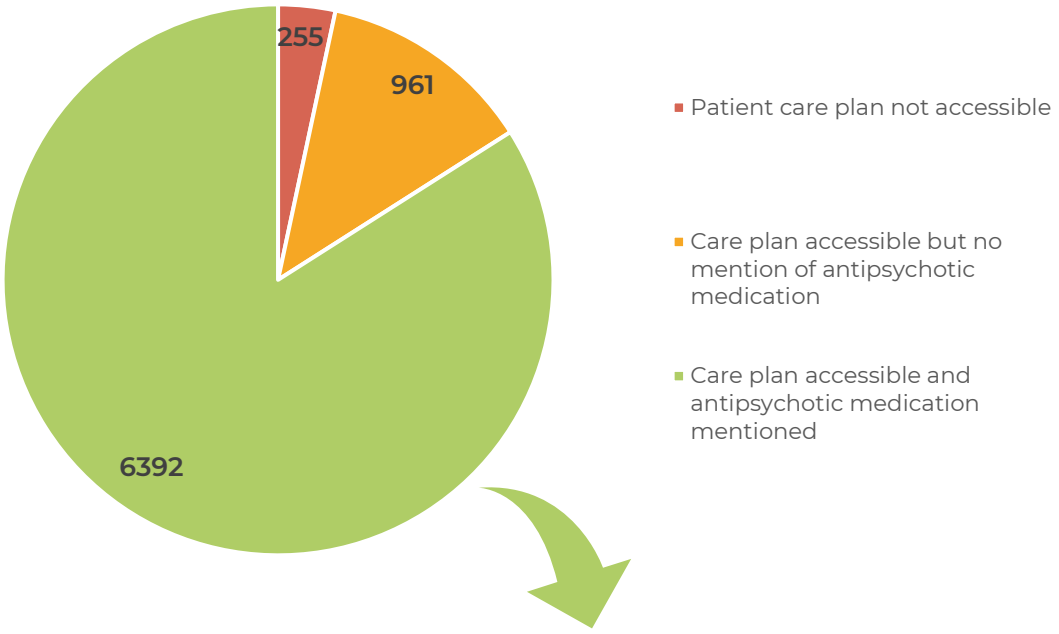
As might be expected, the most common clinical reasons for co-prescribing another antipsychotic medication with clozapine were to optimise response and/or to minimise the metabolic side effects associated with the latter. However, for one patient in five, the clinical reason(s) for augmenting clozapine with a second antipsychotic were not documented, making it difficult to determine whether the risk-benefit balance of such a regimen (individual treatment trial) is favourable.

Trusts may like to consider reviewing local prescribing protocols for treatment-refractory schizophrenia particularly regarding the optimal doses of antipsychotic medications that are commonly used to augment clozapine.

Antipsychotic medication details in the care plan

Around one in every ten care plans that were accessible in the clinical records did not contain any mention of antipsychotic medication. Where the care plan did mention an antipsychotic medication, the name of the medication was recorded in nine cases out of every ten, while in almost three out of every five cases there was a plan for monitoring the clinical benefits and side effects (see below). These proportions were similar, irrespective of the antipsychotic regimen that was prescribed, suggesting that the use of high-dose or combined antipsychotics did not prompt additional clinical monitoring.

Figure 10: Inclusion of the regular antipsychotic regimen in the care plan. National subsample prescribed regular antipsychotic medication (n=7608).



Care plan includes	Single antipsychotic in a standard dose	Single antipsychotic in a high dose	Combined antipsychotics
	n=4979	n=198	n=1215
	n (%)	n (%)	n (%)
The name of the antipsychotic medication(s)	4542 (91)	180 (91)	1096 (90)
The daily dose(s) of the antipsychotic medication(s)	3947 (79)	152 (77)	926 (76)
A schedule for monitoring side effects/physical health	2864 (58)	113 (57)	785 (65)
A schedule for clinical review	2844 (57)	109 (55)	726 (60)
None of the above	178 (4)	11 (6)	51 (4)

When regular high-dose or combined antipsychotic medications are prescribed, there should be:

- Documentation of the target symptoms/behaviours for such a treatment regimen.
- **Regular review of the clinical response, including the target symptoms/behaviours.**
- Monitoring of side effects/tolerability.

Part (a) of the Fig below shows that high-dose and combined antipsychotic prescriptions were not systematically recognised as such across all three clinical service subsamples. Part (b) shows that where such prescribing had been identified, there was a recent documented clinical review of the treatment regimen in the vast majority of cases overall, although around one in ten patients in forensic settings who were prescribed combined antipsychotics did not have a such a documented medication review in the last year. Parts (b) and (c) show that, consistent with clinical expectations, a much higher proportion of high-dose and combined antipsychotic prescriptions in acute settings had been initiated in the last month suggesting that many of these prescriptions may be time-limited.

Figure 11: Regular prescription of a single antipsychotic in high dose or combined antipsychotic medications: (a) Antipsychotic regimen not recognised. (b) Documentation of the clinical response to the regimen. (c) Regimen prescribed for less than a month. Patients with such prescriptions in the three service subsamples: acute adult ward (n=726), complex needs ward (n=345), and forensic ward (n=561).

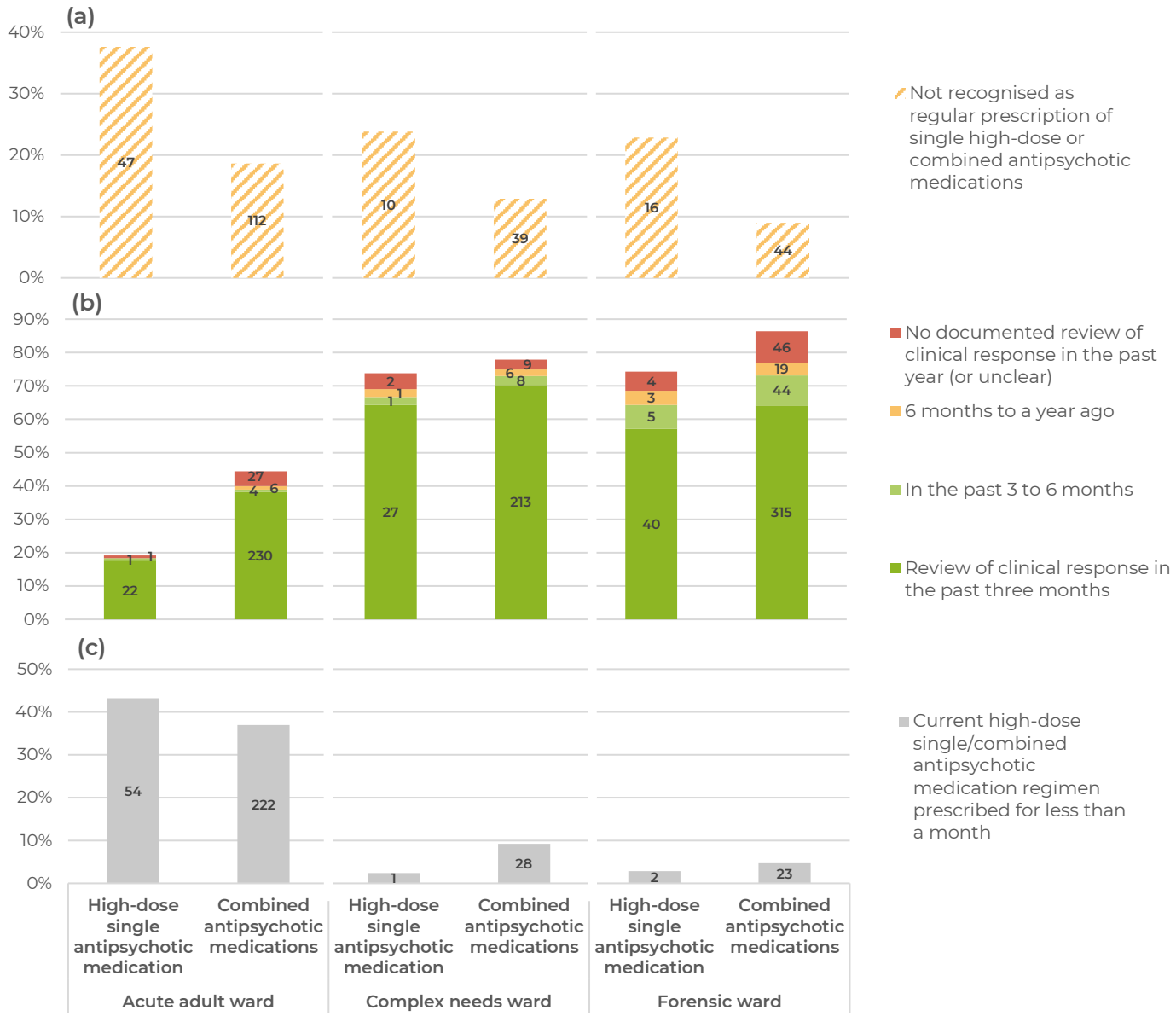


Figure 12: Documented review of medication adherence. Patients recognised as being prescribed a single antipsychotic medication in high dose or combined antipsychotic medications for more than a month, in the three service subsamples: acute adult ward (n=291), complex needs ward (n=267), and forensic ward (n=476).

Where a high-dose or combined antipsychotic regimen was recognised and had been prescribed for more than a month, adherence to medication had been considered in the vast majority of cases.

When regular high-dose or combined antipsychotic medications are prescribed, there should be:

- Documentation of the target symptoms/behaviours for such a treatment regimen.
- Regular review of the clinical response, including the target symptoms/behaviours.
- **Monitoring of side effects/tolerability.**

Table 7a: Physical health measures conducted in the past year in patients prescribed a single antipsychotic medication in a high dose or combined antipsychotic medications. Patients recognised as being on such prescriptions, for more than a month, on an acute adult ward (n=291).

In those patients on acute adult wards who were prescribed high-dose or combined antipsychotic medications, vital signs had been documented in the last 3 months in almost all, metabolic parameters in approaching two thirds, and an ECG in almost three quarters.

As might be expected, admissions to acute adult wards are generally for only a short period of time, and where side effect assessments/physical health checks had been documented, this was done relatively recently in the vast majority of cases (likely coinciding with admission).

Physical health measures	PATIENTS ON AN ACUTE ADULT WARD		
	In the last 3 months	3 months to a year ago	No assessment documented in the last year
	n (%)	n (%)	n (%)
Temperature	277 (95)	5 (2)	9 (3)
Pulse	278 (96)	4 (1)	9 (3)
Blood pressure	279 (96)	4 (1)	8 (3)
Body weight/BMI	253 (87)	19 (7)	19 (7)
ECG	206 (71)	51 (18)	34 (12)
Examination/assessment for movement disorder (extrapyramidal side effects)	163 (56)	31 (11)	97 (33)
Full blood count (FBC)	235 (81)	32 (11)	24 (8)
Renal function tests (U&Es)	220 (76)	38 (13)	33 (11)
Liver function tests (LFTs)	217 (75)	42 (14)	32 (11)
Plasma glucose (or HbA1c)	186 (64)	63 (22)	42 (14)
Plasma lipids	181 (62)	67 (23)	43 (15)
Plasma prolactin level	176 (60)	56 (19)	59 (20)
CPK	77 (26)	25 (9)	189 (65)
Use of formal side-effect rating scale/checklist	46 (16)	18 (6)	227 (78)

Table 7b: Physical health measures conducted in the past year in patients prescribed a single antipsychotic medication in a high dose or combined antipsychotic medications. Patients recognised as being on such prescriptions, for more than a month, on a complex needs ward (n=267).

In those patients under the care of complex needs services, vital signs had been documented in the last three months in just over nine out of every ten cases. Metabolic parameters and an ECG had been documented in the last year in almost nine cases out of every ten patients.

Physical health measures	PATIENTS ON A COMPLEX NEEDS WARD		
	In the last 3 months	3 months to a year ago	No assessment documented in the last year
	n (%)	n (%)	n (%)
Temperature	250 (94)	12 (4)	5 (2)
Pulse	249 (93)	14 (5)	4 (1)
Blood pressure	248 (93)	14 (5)	5 (2)
Body weight/BMI	243 (91)	15 (6)	9 (3)
ECG	137 (51)	103 (39)	27 (10)
Examination/assessment for movement disorder (extrapyramidal side effects)	129 (48)	43 (16)	95 (36)
Full blood count (FBC)	199 (75)	51 (19)	17 (6)
Renal function tests (U&Es)	178 (67)	69 (26)	20 (7)
Liver function tests (LFTs)	176 (66)	74 (28)	17 (6)
Plasma glucose (or HbA1c)	162 (61)	76 (28)	29 (11)
Plasma lipids	158 (59)	83 (31)	26 (10)
Plasma prolactin level	140 (52)	87 (33)	40 (15)
CPK	74 (28)	56 (21)	137 (51)
Use of formal side-effect rating scale/checklist	88 (33)	44 (16)	135 (51)

Table 7c: Physical health measures conducted in the past year in patients prescribed a single antipsychotic medication in a high dose or combined antipsychotic medications. Patients recognised as being on such prescriptions, for more than a month, on a forensic ward (n=476).

The proportions of patients monitored for the various physical health measures were very similar to those in a complex needs service (see Table above).

Physical health measures	PATIENTS ON A FORENSIC WARD		
	In the last 3 months	3 months to a year ago	No assessment documented in the last year
	n (%)	n (%)	n (%)
Temperature	425 (89)	33 (7)	18 (4)
Pulse	437 (92)	26 (5)	13 (3)
Blood pressure	435 (91)	28 (6)	13 (3)
Body weight/BMI	402 (84)	50 (11)	24 (5)
ECG	237 (50)	175 (37)	64 (13)
Examination/assessment for movement disorder (extrapyramidal side effects)	210 (44)	86 (18)	180 (38)
Full blood count (FBC)	339 (71)	103 (22)	34 (7)
Renal function tests (U&Es)	303 (64)	131 (28)	42 (9)
Liver function tests (LFTs)	296 (62)	133 (28)	47 (10)
Plasma glucose (or HbA1c)	278 (58)	143 (30)	55 (12)
Plasma lipids	275 (58)	139 (29)	62 (13)
Plasma prolactin level	219 (46)	146 (31)	111 (23)
CPK	117 (25)	75 (16)	284 (60)
Use of formal side-effect rating scale/checklist	160 (34)	78 (16)	238 (50)

Prescribing of PRN psychotropic medication

In the total national sample, 5607 (72%) patients were prescribed psychotropic medication to be administered on a PRN (pro re nata/ if required) basis. A benzodiazepine was prescribed in 4562 (59%) cases, promethazine in 3174 (41%) and an antipsychotic medication in 875 (11%). The most commonly prescribed medications in each of these classes can be seen in Tables 8 to 10 below and the overall pattern of prescribing in each of the three clinical subsamples is shown in the Figure below.

Figure 13: Oral PRN psychotropic medication prescribed. Patients in the three service subsamples: acute adult ward (n=4244), complex needs ward (n=1238), and forensic ward (n=2277).

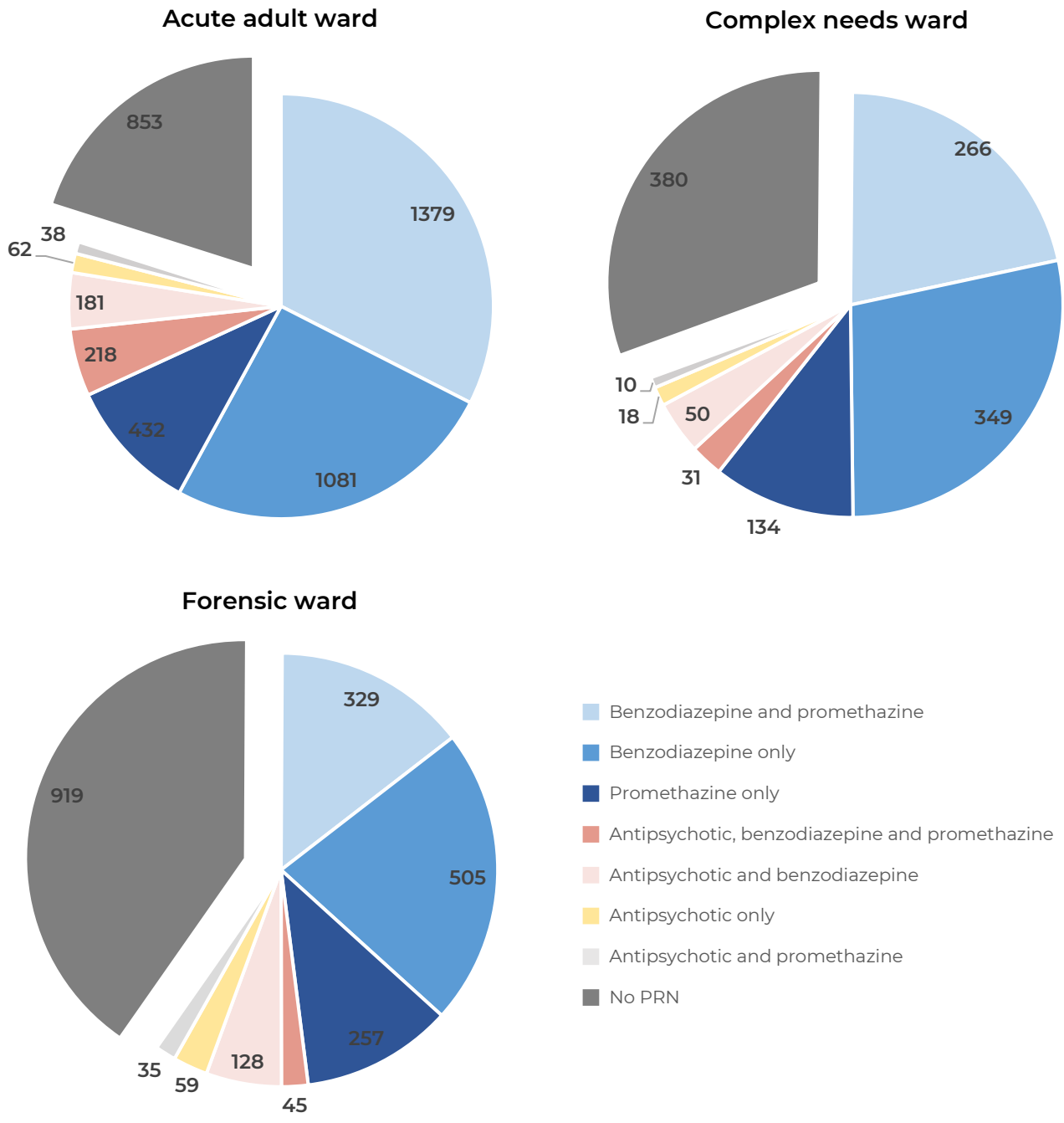


Table 8: Oral PRN benzodiazepine medications prescribed and dosage. Patients in the total national sample (n=7759).

4,562 patients were prescribed 4,680 prescriptions for a PRN benzodiazepine. The most commonly prescribed oral benzodiazepine was lorazepam, which accounted for almost nine out of every ten prescriptions for a PRN medication in this class. The Table below shows the proportion of patients in the total national sample who were prescribed each benzodiazepine medication.

Oral benzodiazepine medication prescribed	n (%) of patients prescribed medication	PRN dose mg/day (median and range)
Lorazepam	3920 (51)	4 (0.5 - 12)
Diazepam	483 (6)	10 (0.5 - 40)
Clonazepam	240 (3)	2 (0.1 - 10)
Midazolam	18 (<1)	20 (10 - 20)
Other benzodiazepine	19 (<1)	-
Any oral benzodiazepine medication	4562 (59)	-

The vast majority of benzodiazepine prescriptions were for doses within the recommended range for the licensed indications. The dose of lorazepam that could be administered PRN was above the licensed maximum of 4mg in 134 (3%) of cases. Such doses may be endorsed in Trust protocols for use under specific clinical circumstances.

Table 9: Oral PRN promethazine prescribed and dosage. Patients in the total national sample (n=7759).

After lorazepam, promethazine was the most commonly prescribed oral PRN medication.

Oral promethazine medication prescribed	n (%) of patients prescribed medication	PRN dose mg/day (median and range)
Promethazine	3174 (41)	100 (10 - 200)

Promethazine is licensed for the short-term treatment of insomnia in adults and the maximum daily dose for this indication is 50mg. A higher dose was prescribed in 2136 cases (67%) and in a very small number of cases (n=34;1%) the prescribed dose was higher than 100mg/day.

Table 10: Oral PRN antipsychotic medications prescribed and dosage. Patients in the total national sample (n=7759).

An antipsychotic medication was prescribed on a PRN basis for 875 patients; the Table below shows the antipsychotic medications and doses prescribed.

Oral PRN antipsychotic medication prescribed	n (%) of patients prescribed medication	PRN dose mg/day (median and range)
Haloperidol	451 (6)	10 (2 - 30)
Olanzapine	177 (2)	10 (2.5 - 30)
Quetiapine	107 (1)	75 (12.5 - 450)
Chlorpromazine	41 (1)	175 (50 - 600)
Zuclopenthixol	32 (<1)	20 (2 - 150)
Risperidone	28 (<1)	3 (0.5 - 16)
Aripiprazole	17 (<1)	10 (5 - 20)
Promazine	14 (<1)	100 (25 - 150)
Clozapine	9 (<1)	50 (25 - 375)
Levomepromazine	9 (<1)	100 (50 - 200)
Amisulpride	4 (<1)	200 (150 - 600)
Flupentixol	2 (<1)	(4 - 9)
Any oral antipsychotic medication	875 (11)	-

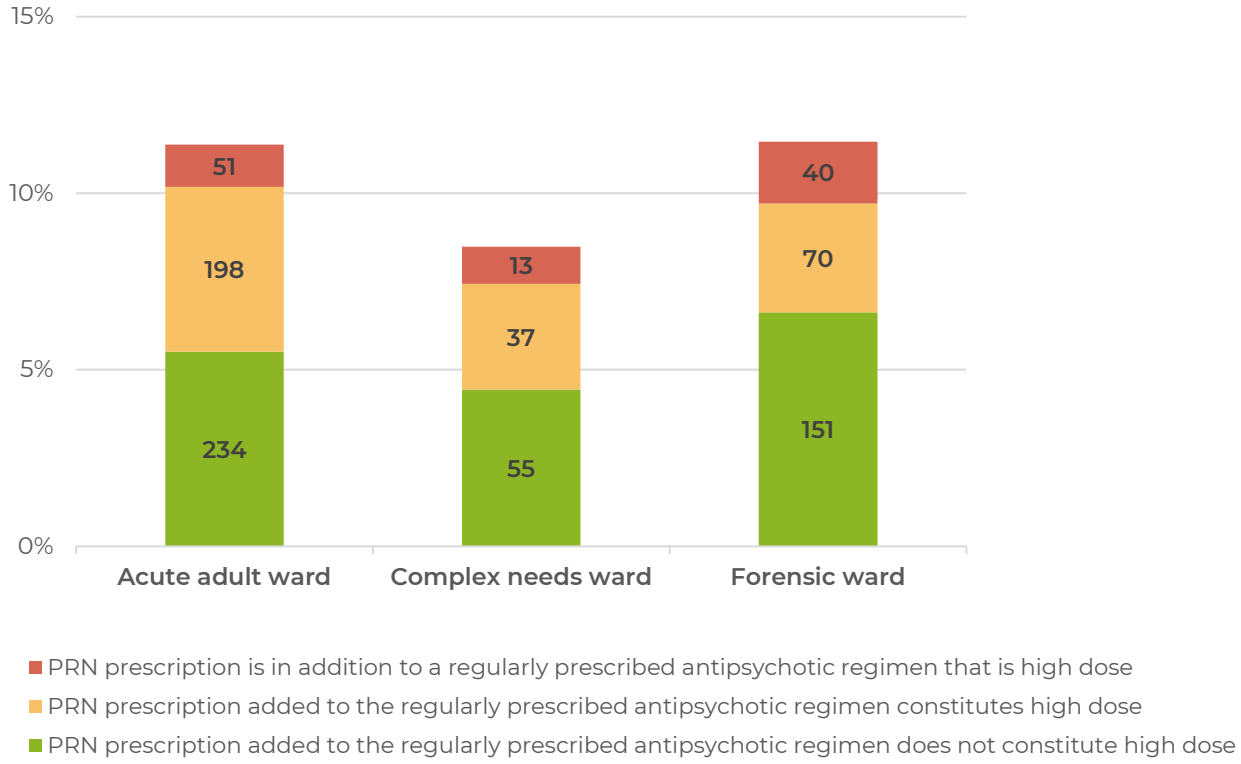
There were two prescriptions for PRN antipsychotic medication that were for doses above the licensed maximum (one for olanzapine 30mg and one for haloperidol 30mg)

Contribution of PRN antipsychotic medication to high dose

The Figure below shows that fewer than one patient in eight in the total national sample was prescribed antipsychotic medication to be administered on a PRN basis. The proportion prescribed such medication was slightly higher in acute settings, where by definition, the vast majority of patients would be receiving treatment for an acute exacerbation of their illness, and also in forensic settings where such prescriptions may be a pragmatic pre-emptive management strategy should 24-hour on-site medical cover not be available to respond to symptom/behavioural exacerbations.

The Figure also shows that when PRN antipsychotic medication is prescribed, this is in addition to an existing high-dose antipsychotic regimen for one patient in eight. There is no evidence to support a favourable risk/benefit profile for such a strategy.

Figure 14: The relationship between oral PRN antipsychotic medication, regularly prescribed antipsychotic medication, and the high-dose threshold. Patients in the three service subsamples: acute adult ward (n=4244), complex needs ward (n=1238), and forensic ward (n=2277).



Trusts may like to consider adding/strengthening recommendations in their guidelines for the management of acute behavioural disturbance to caution against prescribing antipsychotic medication on a PRN basis in those patients who are already receiving a high-dose regimen of such medication.

Performance against practice standard 2

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- **A clear description of the symptoms/behaviours for which the PRN medication is indicated.**
- Specification of the maximum daily dose that can be administered.
- Regular review of the continuing need for such a prescription.

The Figure below shows that the clinical reasons for administering PRN medication were clearly documented in nine cases out of every ten. This profile was similar across the three different classes of medication and also across the three clinical service subsamples (data not shown).

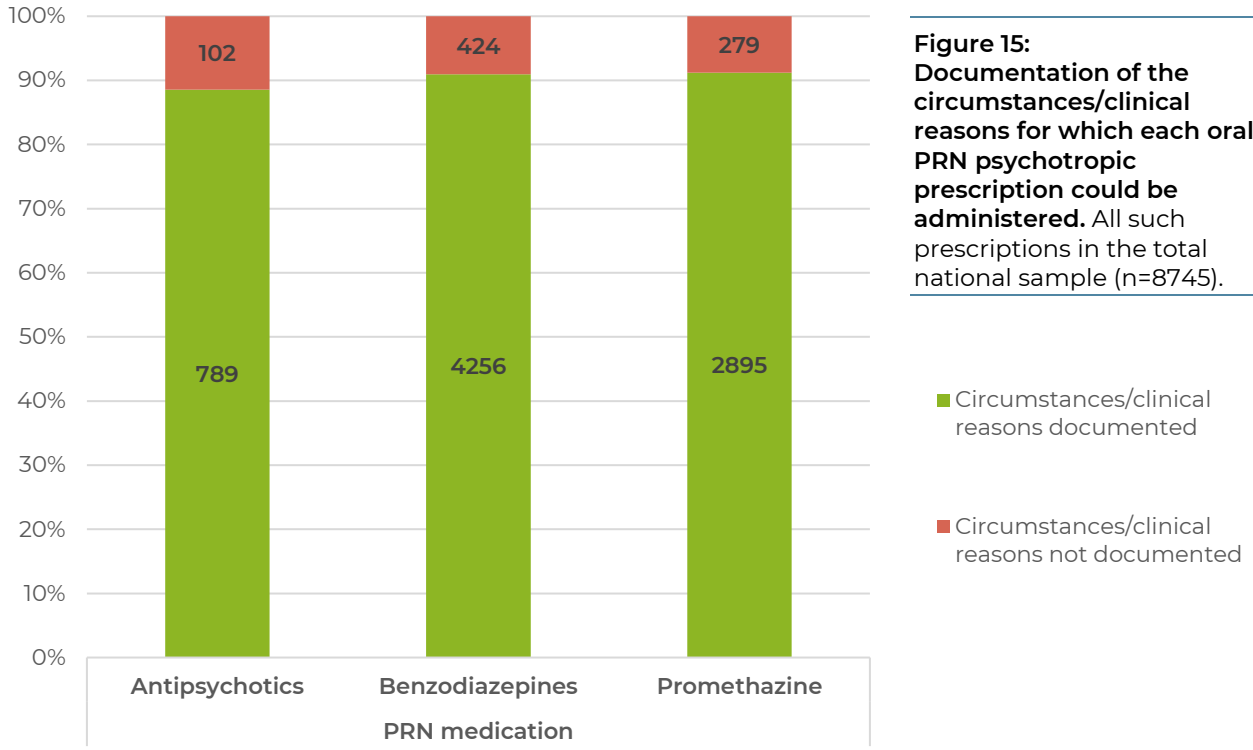


Figure 15: Documentation of the circumstances/clinical reasons for which each oral PRN psychotropic prescription could be administered. All such prescriptions in the total national sample (n=8745).

Where the clinical reasons for administering PRN medication are not clearly described, administration is left to the discretion of nursing staff whose understanding of the purpose of such medication may differ from that of the prescriber (Baker et al., 2008).

Those Trusts where the clinical reasons for administering PRN were not clearly documented (see page 12) may like to review their clinical pharmacy screening protocols, to ensure that all prescriptions for oral PRN psychotropic medication that do not clearly specify the reasons/circumstances for use are brought to the attention of the prescriber.

Documentation of administration of PRN medication

The Tables below show that where psychotropic medication was prescribed on a PRN basis, as might be expected, such medication was more likely to have been administered in the last 4 weeks to patients in acute adult services.

There was no documentation of the reasons for administering PRN medication in around a third of cases in acute adult and forensic settings. The reason for administration was more commonly documented in complex needs services.

Table 11: Documentation of the reason why PRN oral antipsychotic medication had been administered. All such prescriptions on an acute adult ward (n=499), complex needs ward (n=109), or forensic ward (n=267).

Most recent administration of oral PRN antipsychotic medication	n (%)	Following administration, was the reason documented?	
		YES	NO
Acute adult ward			
In the last week	209 (42)	131 (63)	78 (37)
1 to 4 weeks	99 (20)	76 (77)	23 (23)
Not administered in the last 4 weeks	191 (38)	-	-
Complex needs ward			
In the last week	32 (29)	26 (81)	6 (19)
1 to 4 weeks	29 (27)	26 (90)	3 (10)
Not administered in the last 4 weeks	48 (44)	-	-
Forensic ward			
In the last week	99 (37)	67 (68)	32 (32)
1 to 4 weeks	33 (12)	22 (67)	11 (33)
Not administered in the last 4 weeks	135 (51)	-	-

Table 12: Documentation of the reason why PRN oral benzodiazepine medication or promethazine had been administered. All such prescriptions on an acute adult ward (n=3329), complex needs ward (n=840), or forensic ward (n=1299).

Most recent administration of oral PRN benzodiazepine medication or promethazine	n(%)	Following administration, was the reason documented?	
		YES	NO
Acute adult ward			
In the last week	1626 (49)	1049 (65)	577 (35)
1 to 4 weeks	711 (21)	501 (70)	210 (30)
Not administered in the last 4 weeks	992 (30)	-	-
Complex needs ward			
In the last week	303 (36)	234 (77)	69 (23)
1 to 4 weeks	180 (21)	129 (72)	51 (28)
Not administered in the last 4 weeks	357 (43)	-	-
Forensic ward			
In the last week	475 (37)	329 (69)	146 (31)
1 to 4 weeks	240 (18)	164 (68)	76 (32)
Not administered in the last 4 weeks	584 (45)	-	-

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- A clear description of the symptoms/behaviours for which the PRN medication is indicated.
- **Specification of the maximum daily dose that can be administered.**
- Regular review of the continuing need for such a prescription.

The Figure below shows that the maximum dose of PRN medication that could be administered was clearly documented in almost all cases. This profile was similar across the three different classes of medication and also across the three clinical service subsamples (data not shown).

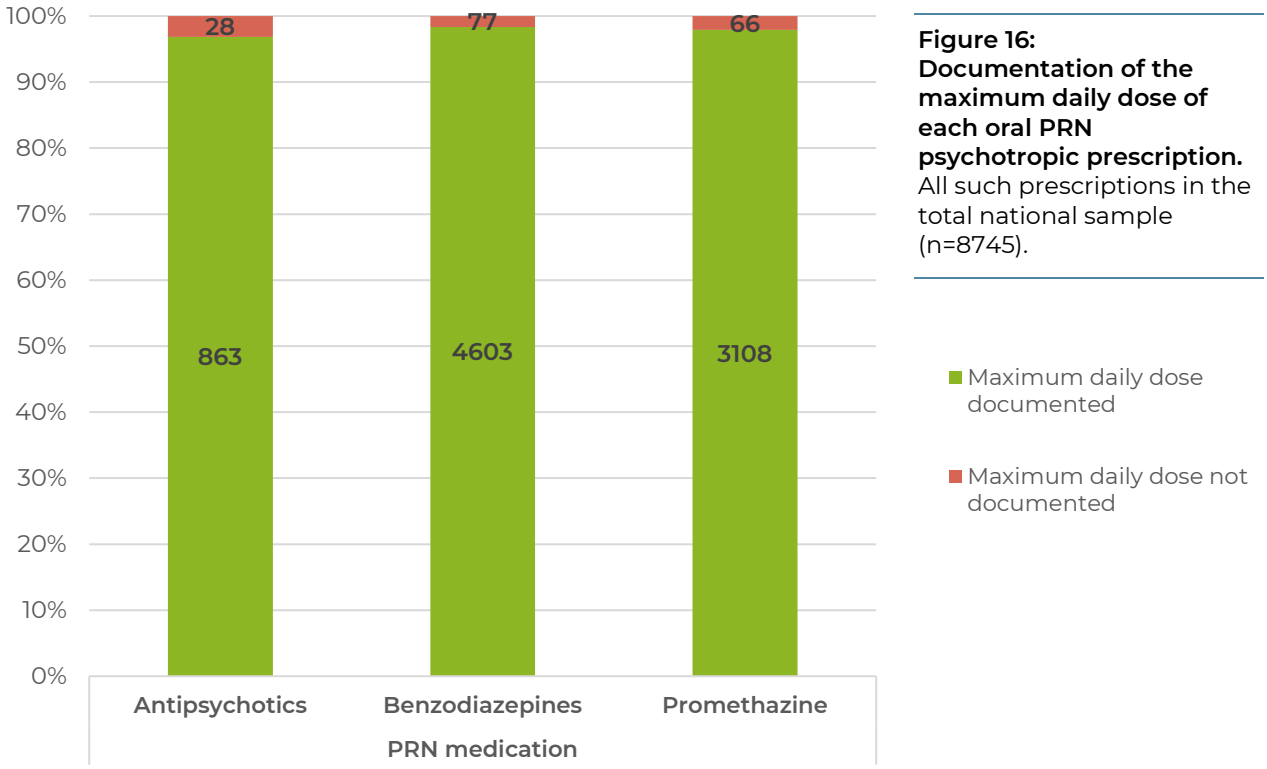


Figure 16: Documentation of the maximum daily dose of each oral PRN psychotropic prescription. All such prescriptions in the total national sample (n=8745).

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- A clear description of the symptoms/behaviours for which the PRN medication is indicated.
- Specification of the maximum daily dose that can be administered.
- **Regular review of the continuing need for such a prescription.**

How often PRN medication has been administered, the reasons for administration, and whether it was effective, should be regularly reviewed as this information has implications for a patient's medication regimen and wider care plan.

The Figures below show that the pattern of review was similar for all three classes of PRN psychotropic medication. However, compared with acute adult settings, the continuing need for PRN psychotropic medication was more likely to be reviewed in non-acute settings.

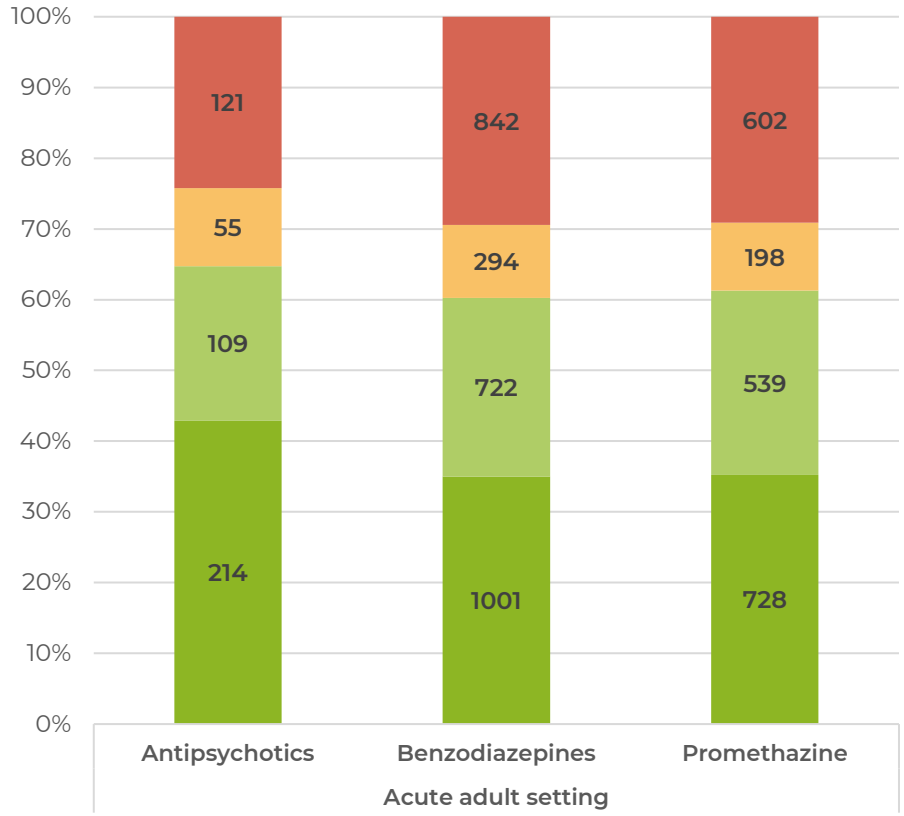


Figure 17a: Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine. All patients prescribed PRN psychotropic medication on an acute adult ward.

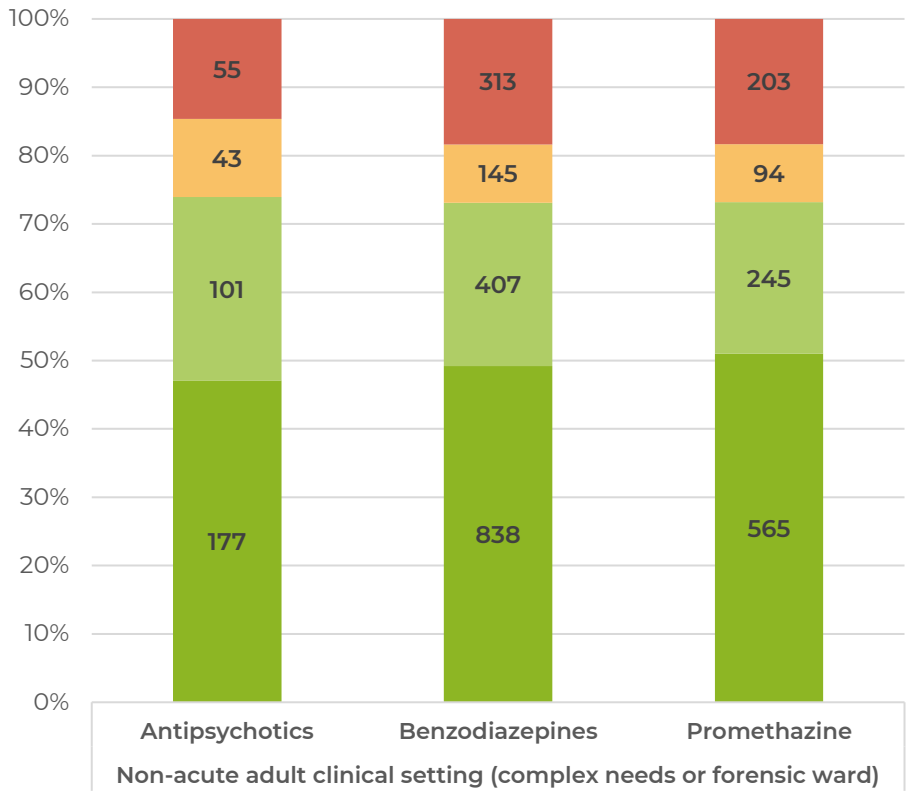


Figure 17b: Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine. All patients prescribed PRN psychotropic medication in a non-acute adult clinical setting.

Where practice falls short of the standard, Trusts may like to review their systems for ensuring that prescriptions for oral PRN psychotropic medication are regularly reviewed, and that such reviews are documented. For example, whether it would be helpful if paper prescription charts/electronic prescribing systems included a pre-set time limit for such prescriptions, after which they are no longer valid unless re-authorised by the prescriber.

Trust level results

Analyses presented in this section were conducted for each Trust individually and for the total sample to allow benchmarking.

Data from each Trust are presented by code.

Your Trust code is: 012

Charts in this section are ordered by performance against the practice standards so the position of your Trust will vary in each Figure relative to other Trusts.

Summary of national participation

Trust code	Number of participating teams	Number of cases
002	6	146
003	19	122
005	16	107
006	14	178
008	4	85
011	10	145
012	23	190
013	8	107
015	11	81
016	1	71
017	5	50
018	10	73
020	16	87
021	16	208
022	36	384
025	11	128
027	16	208
029	22	163
030	26	194
031	1	1
034	6	53
040	11	142
042	8	36
050	50	549
054	31	277
056	7	95
062	5	62
063	14	65

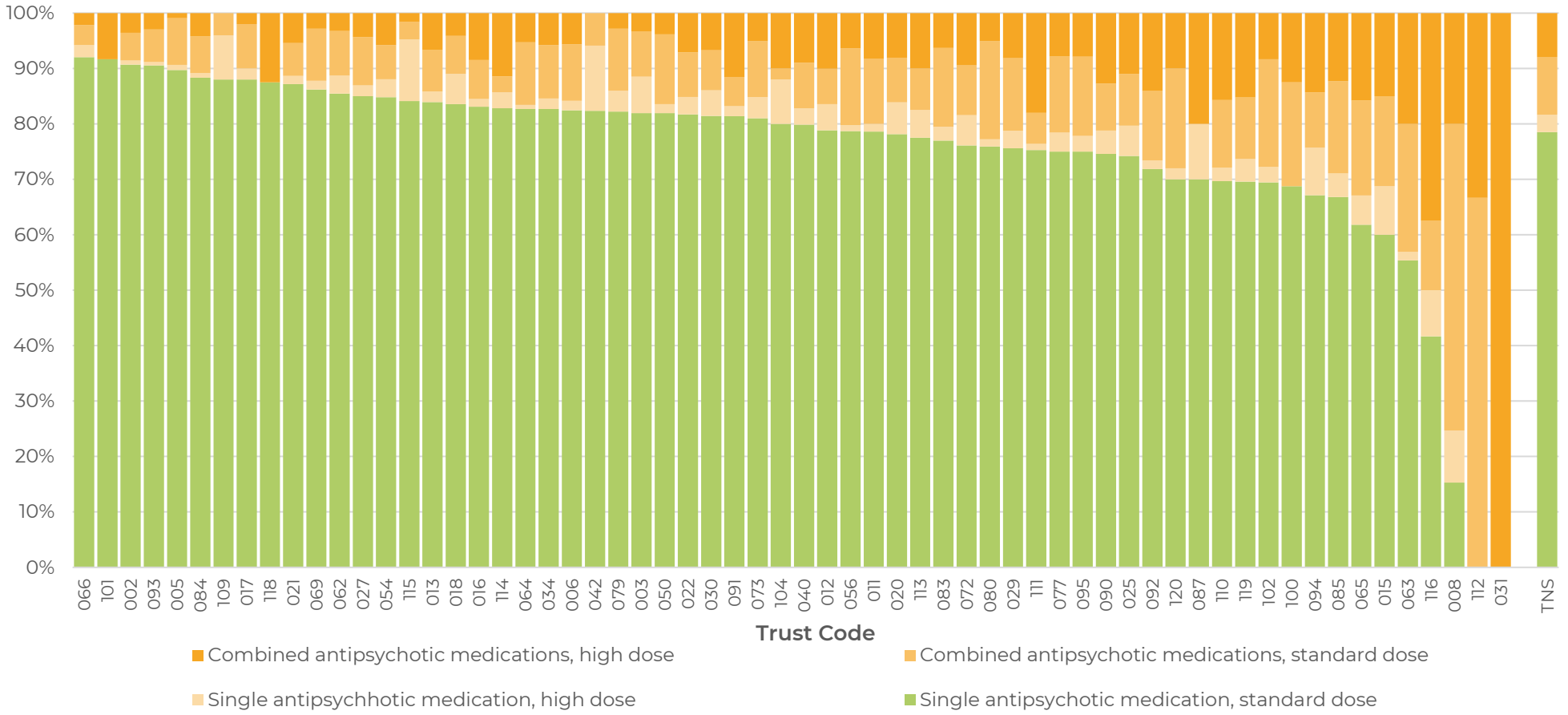
Table 13: The number of participating clinical teams and data submissions for each participating Trust/healthcare organisation (n=62).

064	16	133
065	7	76
066	5	138
069	34	320
072	4	205
073	7	92
077	12	116
079	23	113
080	14	81
083	6	243
084	4	120
085	4	212
087	2	10
090	13	133
091	14	115
092	4	65
093	11	193
094	8	79
095	4	153
100	2	16
101	2	12
102	3	36
104	2	50
109	1	25
110	50	379
111	4	90
112	1	3
113	1	40
114	2	35
115	6	63
116	2	32
118	1	16
119	4	301
120	7	57
TNS	**683**	**7759**

Treatment target

Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range.

Figure 18: Proportion of patients regularly prescribed a single antipsychotic medication or combined antipsychotic medications, calculated as standard or high dose. Patients prescribed such medication regimens in the total national sample (n=7608) and each Trust sample.

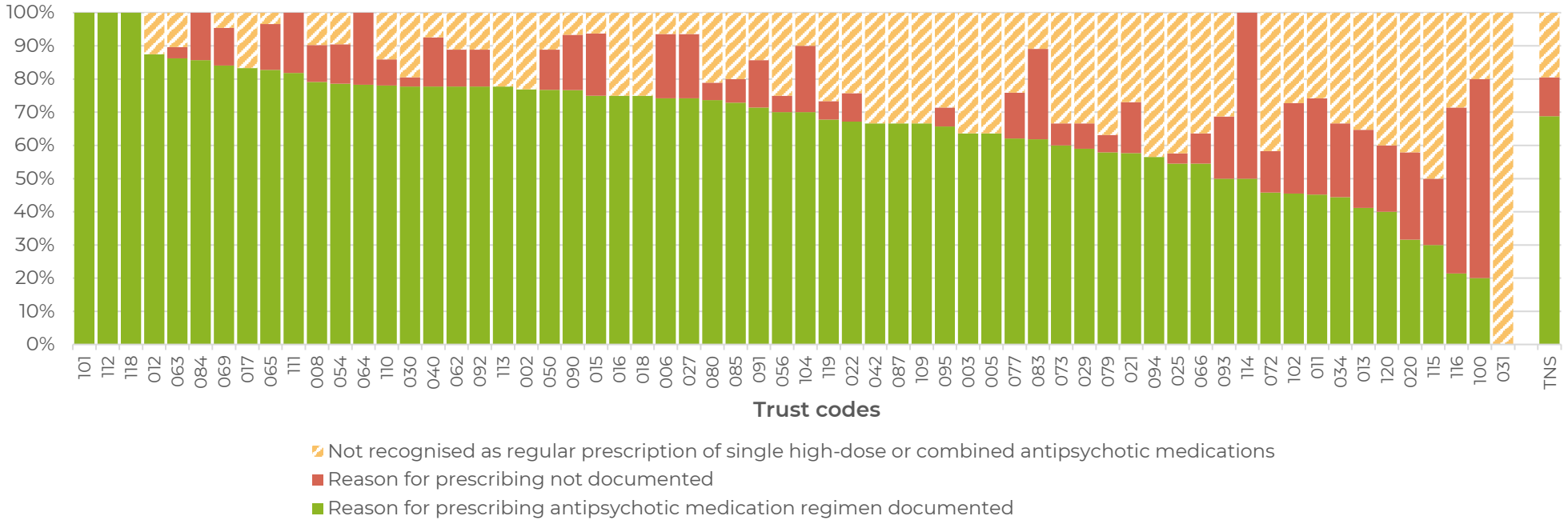


Performance against practice 1

When regular high-dose or combined antipsychotic medications are prescribed, there should be:

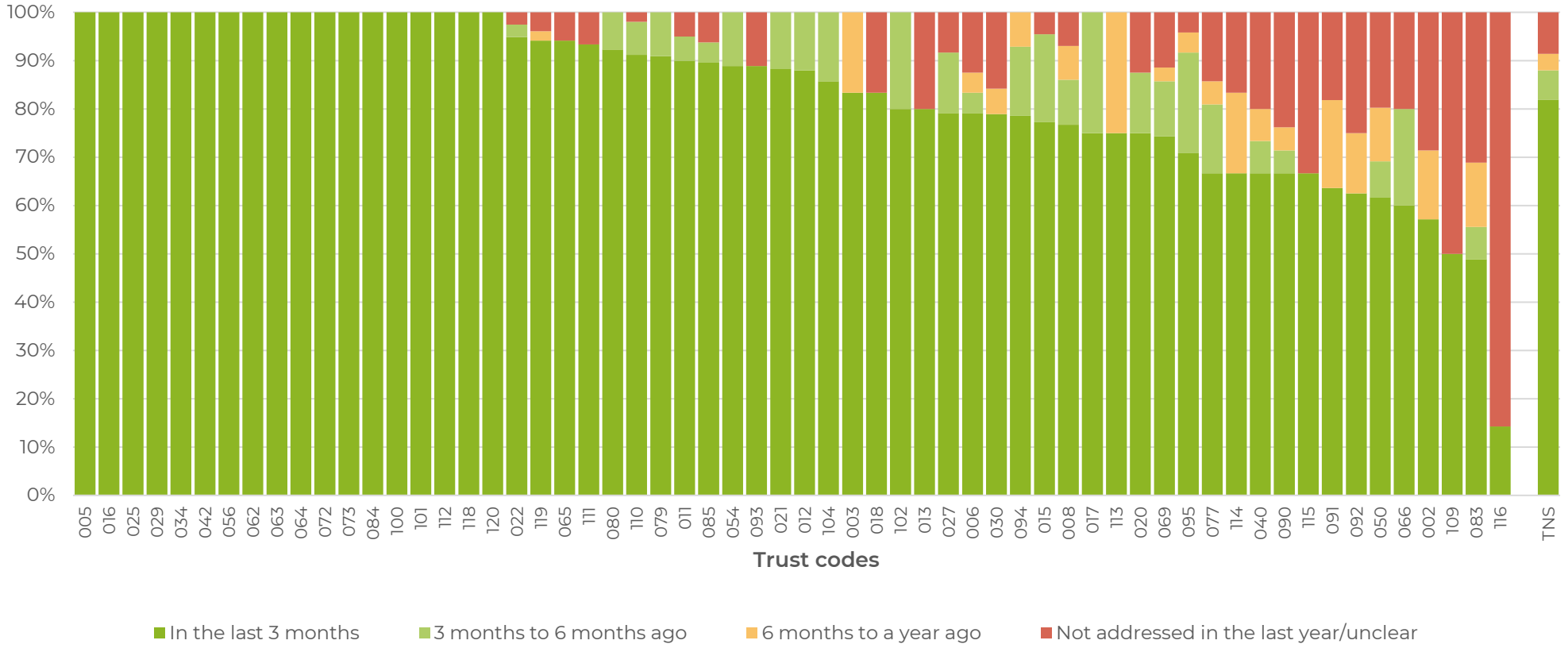
- Documentation of the target symptoms/behaviours for such a treatment regimen.
- Regular review of the clinical response, including the target symptoms/behaviours.
- Monitoring of side effects/tolerability.

Figure 19: Documentation of the clinical reason for prescribing a single antipsychotic medication in high dose or combined antipsychotic medications. Patients with such prescriptions in the total national sample (n=1632) and in each Trust sample.



Depending on the results shown in the Figure above, Trusts may wish to review local policies and protocols that address prescribing of high-dose antipsychotic medication to ensure that the contribution of combinations of regular antipsychotic medication to high dosage regimens is acknowledged, so that such prescriptions prompt the initiation of appropriate monitoring of physical health and mental state.

Figure 20: Documentation of the clinical response to the recognised, regular prescription of a single antipsychotic in high dose or combined antipsychotic medications. Patients prescribed such antipsychotic regimens for more than a month in the total national sample (n=1034) and in each Trust sample.



Where practice has fallen short of this standard, Trusts may like to consider whether the care planning component of their electronic patient record system has a specific field that prompts regular medication review.

Monitoring of side effects/tolerability

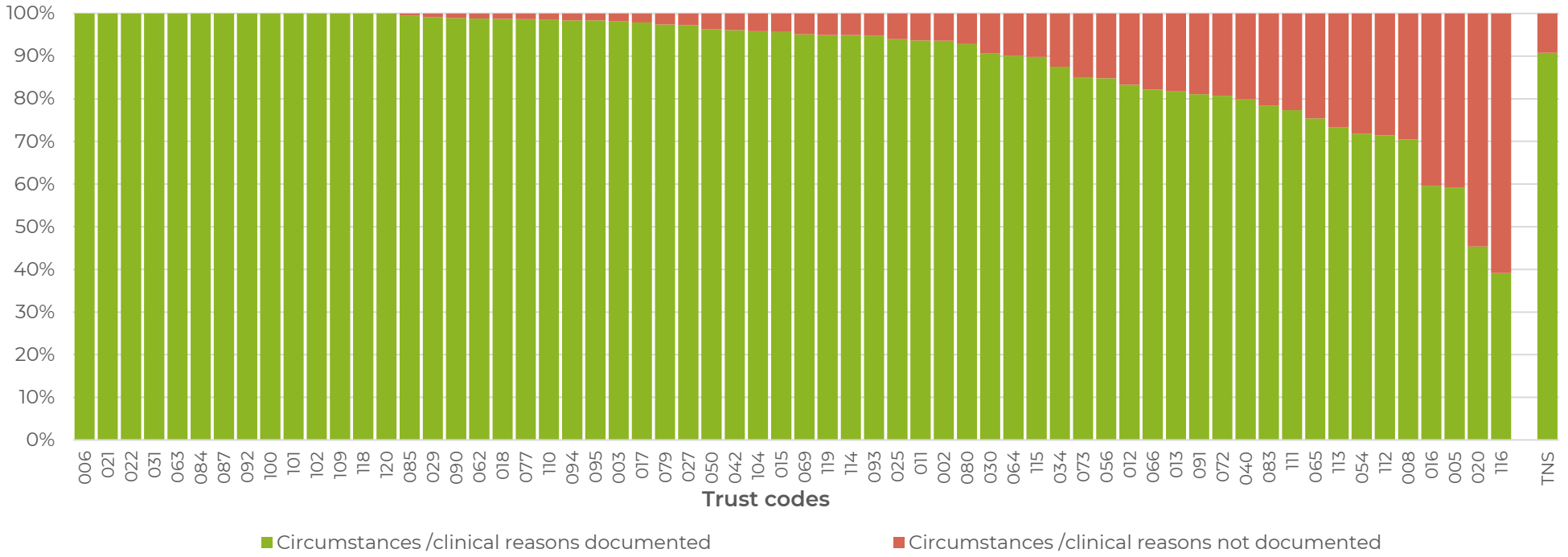
Your Trust's data relating to this aspect of practice standard 1 may be found in Table 1 in the Executive summary.

Performance against practice 2

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- A clear description of the symptoms/behaviours for which the PRN medication is indicated.
- Specification of the maximum daily dose that can be administered.
- Regular review of the continuing need for such a prescription.

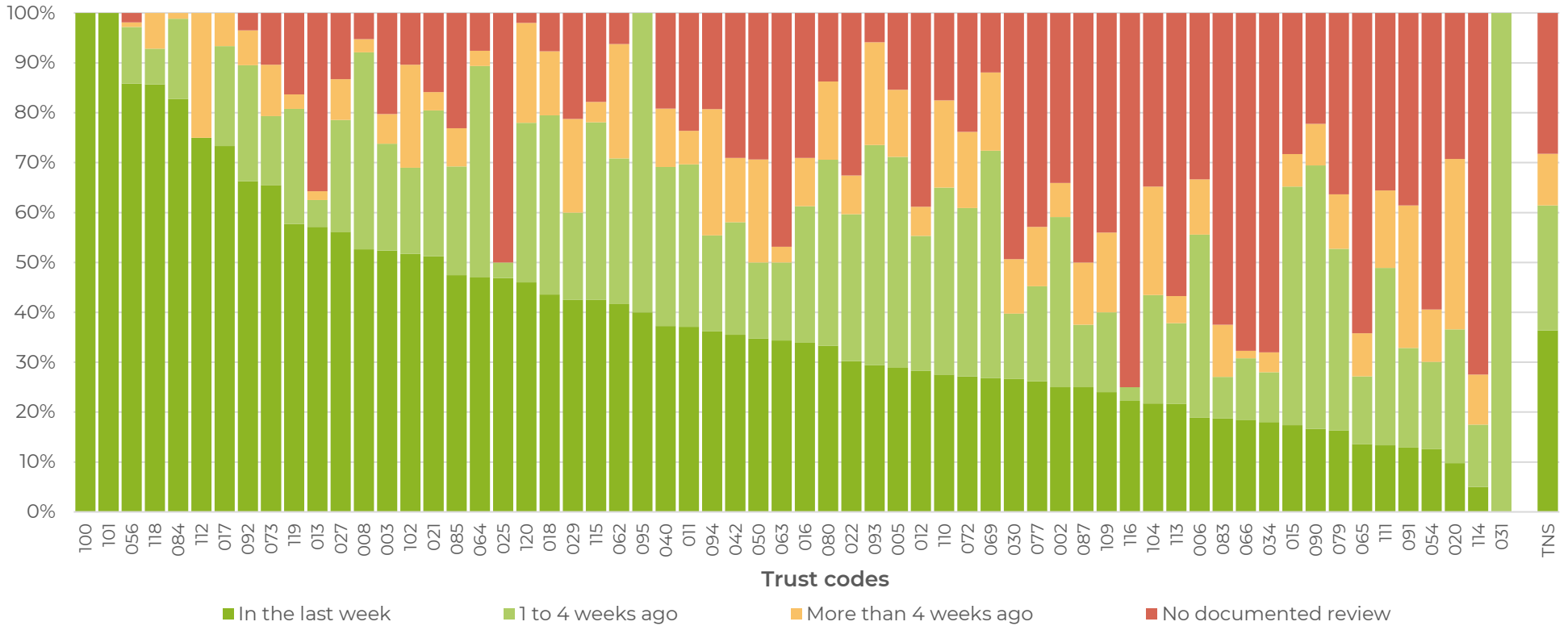
Figure 21: Documentation of the circumstances/clinical reasons for which each oral PRN psychotropic prescription could be administered. All such prescriptions in the total national sample (n=8745) and each Trust sample.



Those Trusts where the clinical reasons for administering PRN were not clearly documented may like to review their clinical pharmacy screening protocols, to ensure that all prescriptions for oral PRN psychotropic medication that do not clearly specify the reasons/circumstances for use are brought to the attention of the prescriber.

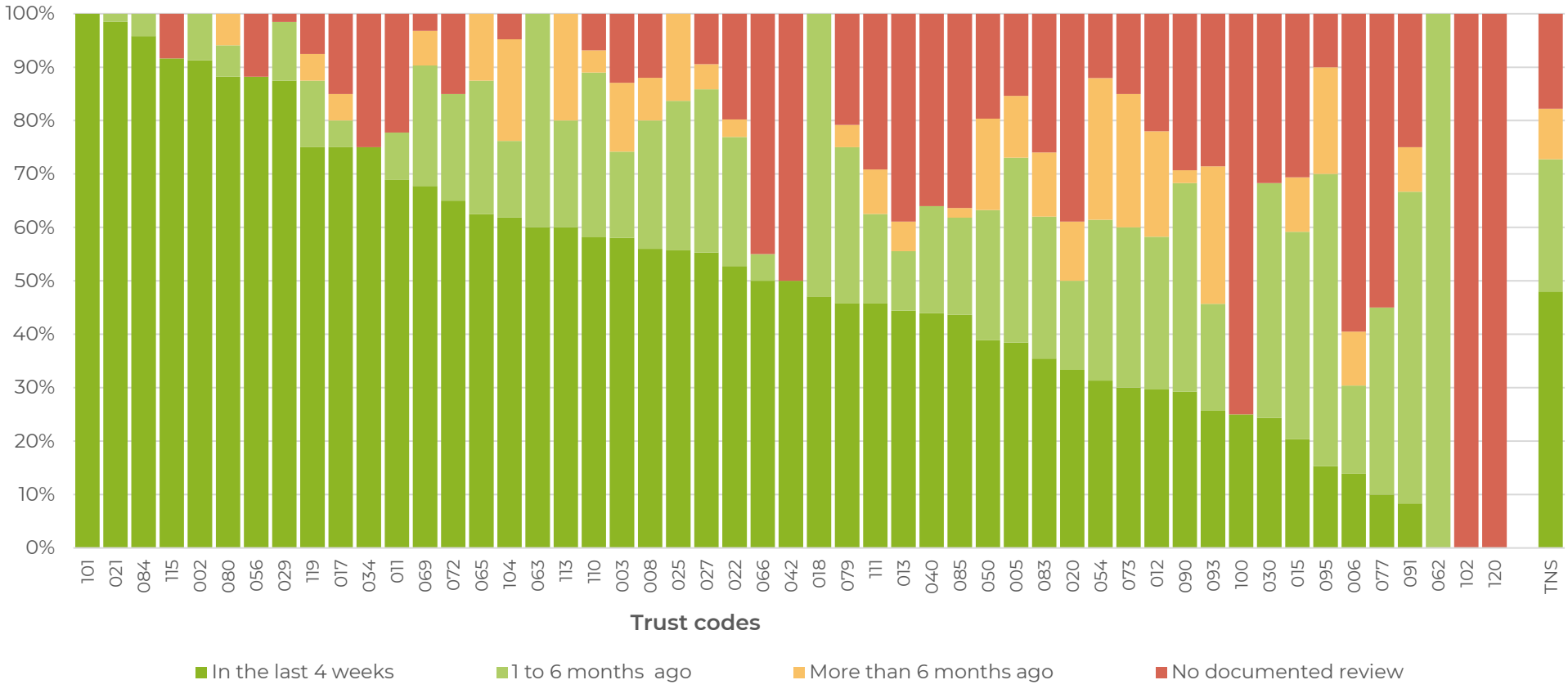
Figure 22: Documentation of the maximum daily dose of each oral PRN psychotropic prescription. All such prescriptions in the total national sample (n=8745) and each Trust sample.

Figure 23a: Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine.
National subsample of patients prescribed a PRN prescription for psychotropic medication on an acute adult ward and each Trust subsample



Where practice falls short of the standard, Trusts may like to review their systems for ensuring that prescriptions for oral PRN psychotropic medication are regularly reviewed, and that such reviews are documented. For example, whether it would be helpful if paper prescription charts/electronic prescribing systems included a pre-set time limit for such prescriptions, after which they are no longer valid unless re-authorised by the prescriber.

Figure 23b: Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine.
National subsample of patients prescribed a PRN prescription for psychotropic medication in a non-acute adult setting and each Trust subsample.



Where practice falls short of the standard, Trusts may like to review their systems for ensuring that prescriptions for oral PRN psychotropic medication are regularly reviewed, and that such reviews are documented. For example, whether it would be helpful if paper prescription charts/electronic prescribing systems included a pre-set time limit for such prescriptions, after which they are no longer valid unless re-authorised by the prescriber.

Clinical team level results

Analyses presented in this section were conducted for each clinical team from your Trust individually, for your total Trust sample and for the total national sample to allow benchmarking.

Data from each Trust clinical team are presented by code only.

The POMH Central Project Team does not know the identity of individual clinical teams.

Only the Local POMH lead for your Trust or organisation has the key to clinical team codes. You should contact this person if you need to identify data for your own clinical team.

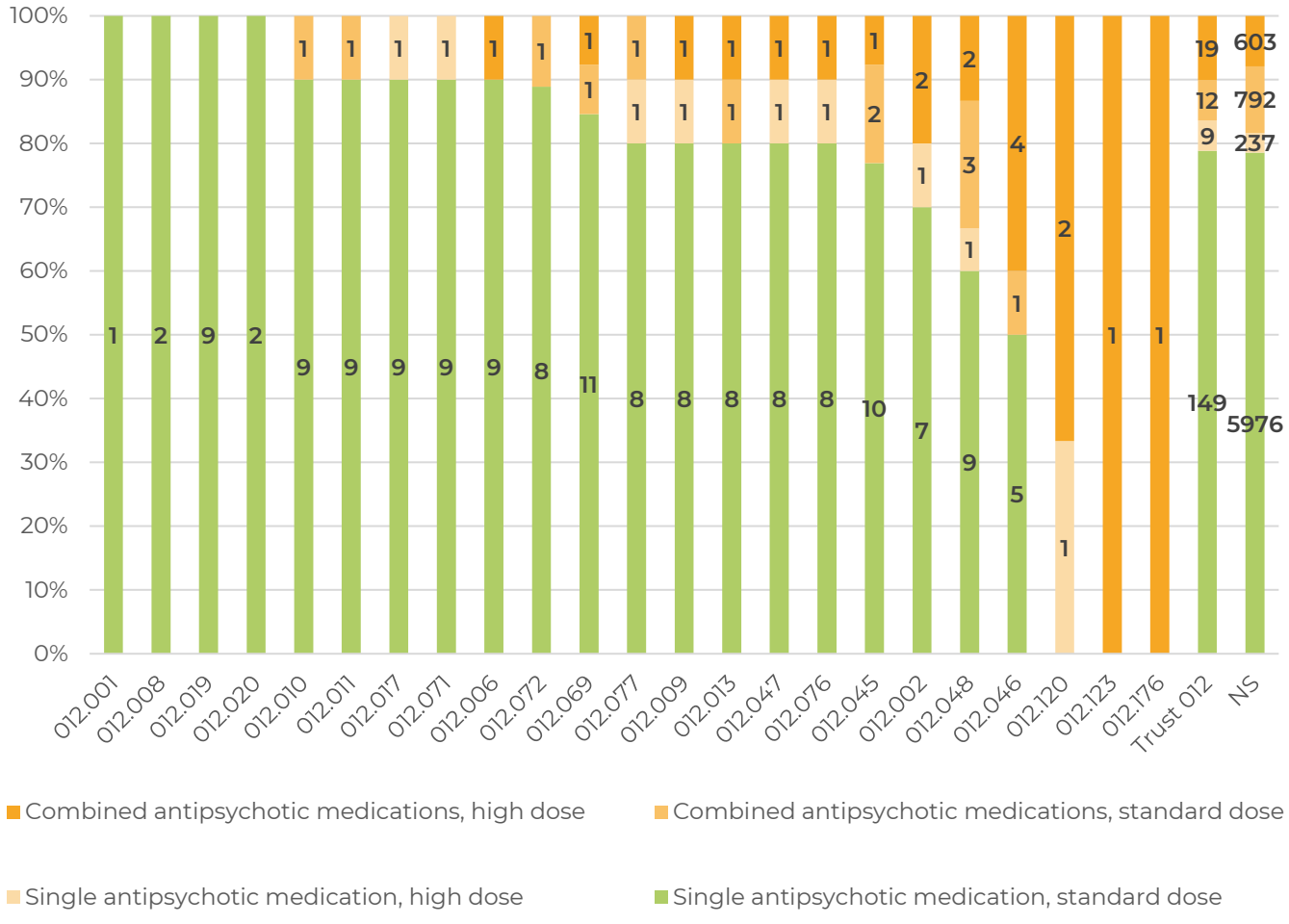
Charts in this section are ordered by frequency of key results and so the position of teams in each Figure will vary.

In the Figures below, the number of clinical teams shown may vary. Clinical teams will be missing if they had no data to submit for the relevant patient subsample.

Treatment Target

Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range

Figure 24: Proportion of patients regularly prescribed a single antipsychotic medication or combined antipsychotic medications, calculated as standard or high dose. National sample and your Trust clinical team samples.

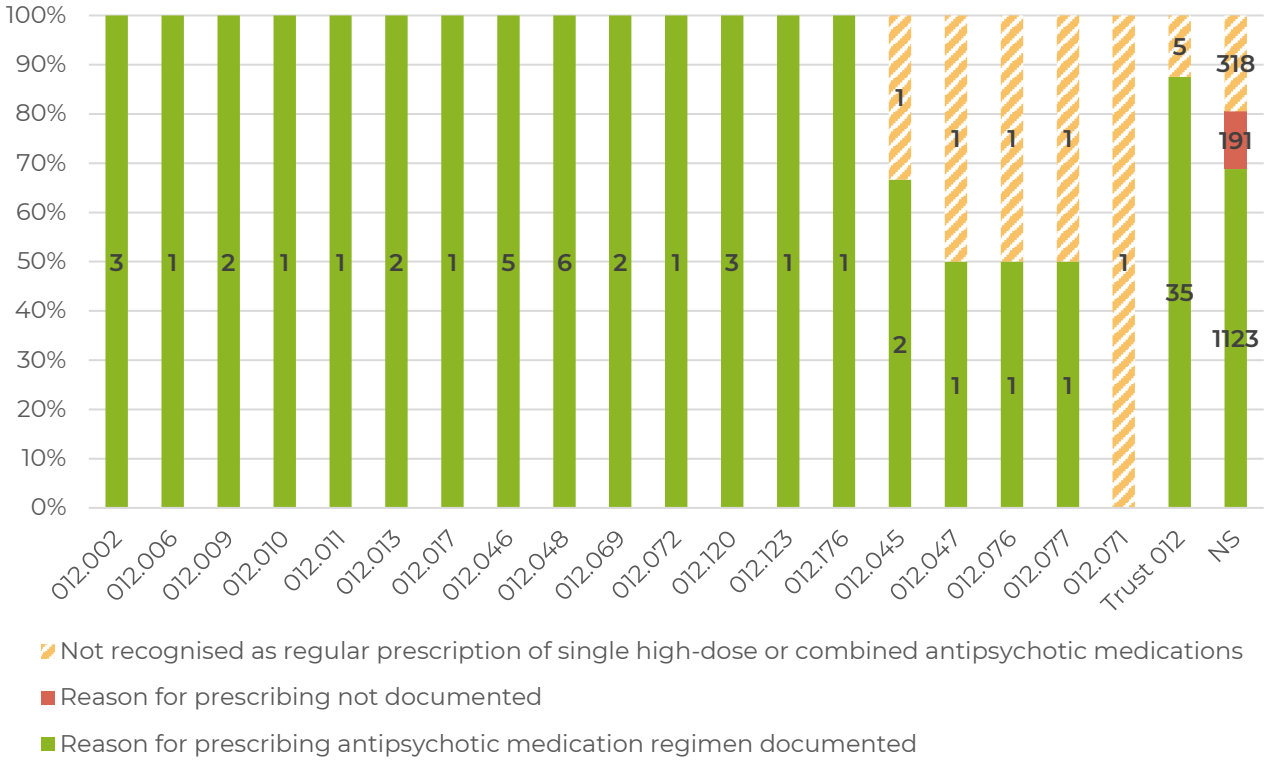


Performance against practice standard 1

When regular high-dose or combined antipsychotic medications are prescribed, there should be:

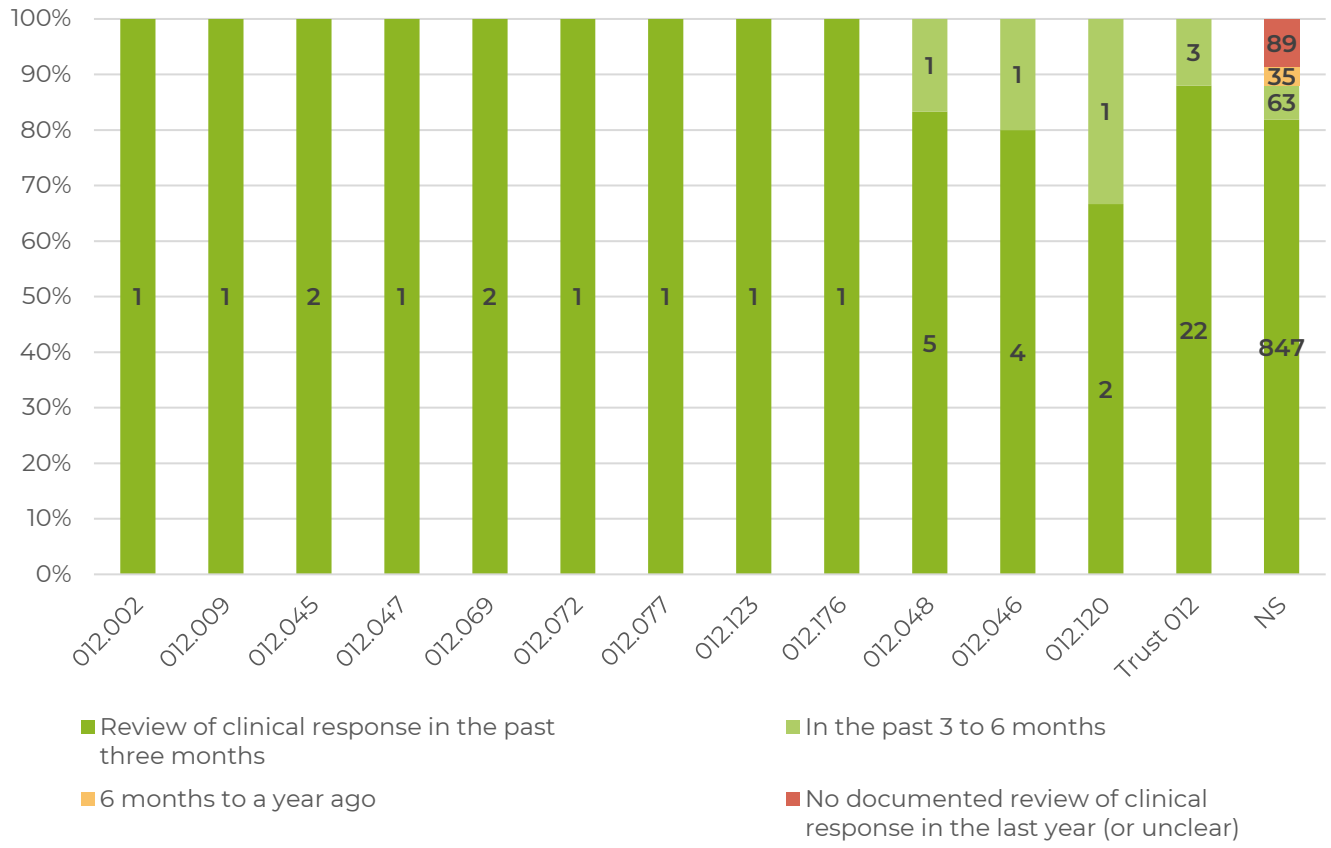
- Documentation of the target symptoms/behaviours for such a treatment regimen.
- Regular review of the clinical response, including the target symptoms/behaviours.
- Monitoring of side effects/tolerability.

Figure 25: Documentation of the clinical reason for prescribing a single antipsychotic medication in high dose or combined antipsychotic medications. National subsample of patients recognised as being prescribed such medication regimens and your Trust clinical team subsamples.



Depending on the results shown in the Figure above, Trusts may wish to review local policies and protocols that address prescribing of high-dose antipsychotic medication to ensure that the contribution of combinations of regular antipsychotic medication to high dosage regimens is acknowledged, so that such prescriptions prompt the initiation of appropriate monitoring of physical health and mental state.

Figure 26: Documentation of the clinical response to the recognised, regular prescription of a single antipsychotic in high dose or combined antipsychotic medications. National subsample of patients prescribed such antipsychotic regimens for more than a month and your Trust clinical team subsamples.



Where practice has fallen short of this standard, Trusts may like to consider whether the care planning component of their electronic patient record system has a specific field that prompts regular medication review.

Performance against practice standard 2

When oral PRN antipsychotic and/or benzodiazepine medications are prescribed, there should be:

- A clear description of the symptoms/behaviours for which the PRN medication is indicated.
- Specification of the maximum daily dose that can be administered
- Regular review of the continuing need for such a prescription

Figure 27: Documentation of the circumstances/clinical reasons for which each oral PRN psychotropic prescription could be administered. All such prescriptions in the total national sample and each of your Trust clinical team samples.

Those Trusts where the clinical reasons for administering PRN were not clearly documented may like to review their clinical pharmacy screening protocols, to ensure that all prescriptions for oral PRN psychotropic medication that do not clearly specify the reasons/circumstances for use are brought to the attention of the prescriber.

Figure 28: **Documentation of the maximum daily dose of each oral PRN psychotropic prescription.** All such prescriptions in the national sample and each of your Trust clinical team samples.

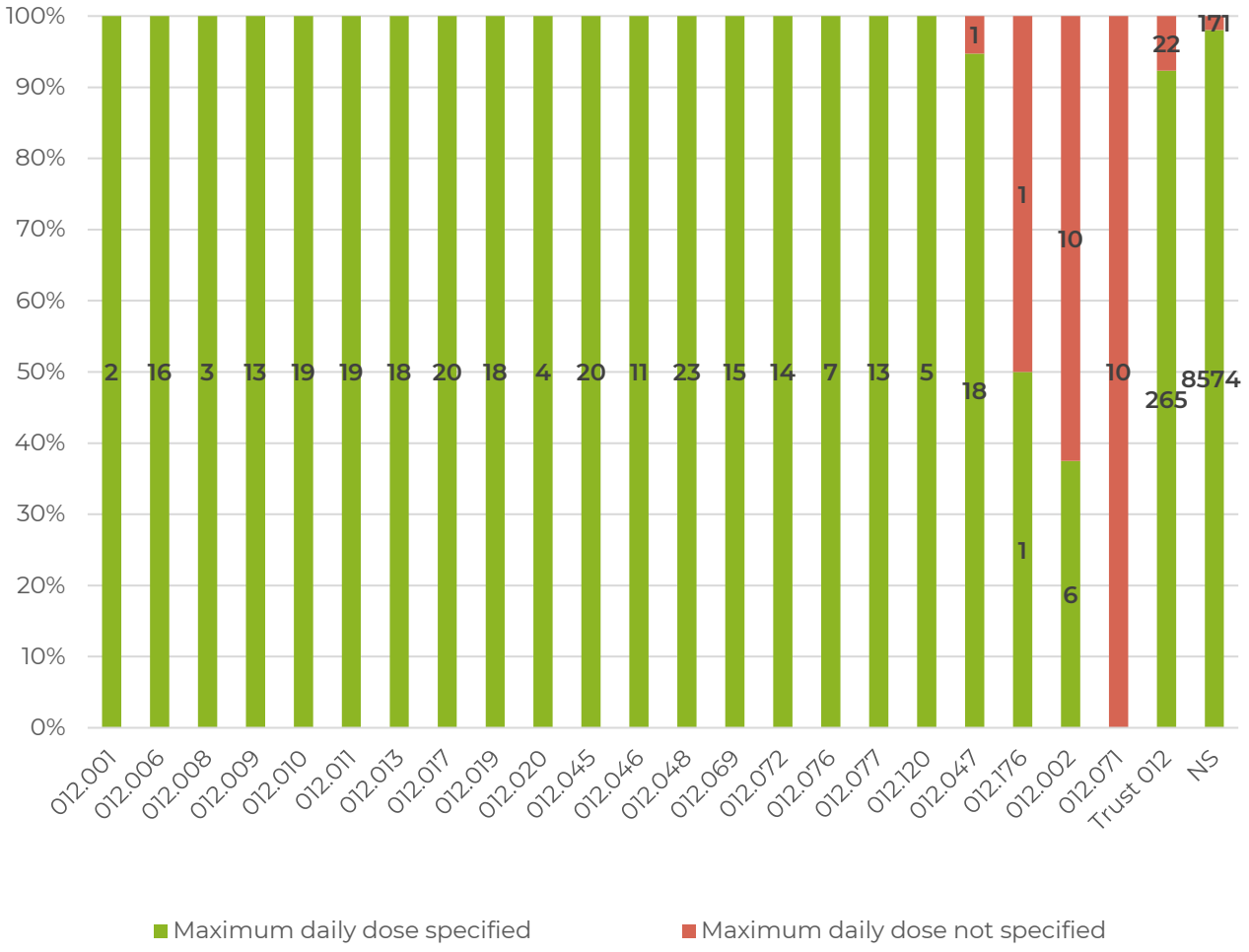


Figure 29a: Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine. National subsample of patients prescribed a PRN prescription for psychotropic medication on an acute adult ward and each of your Trust clinical team subsamples.

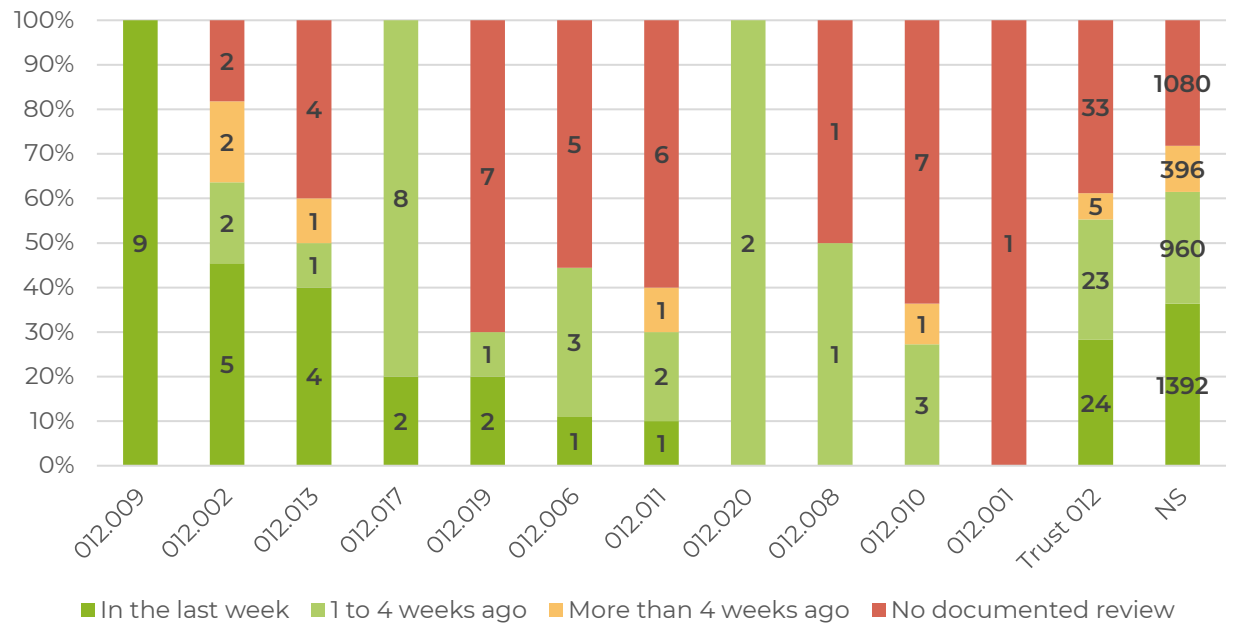
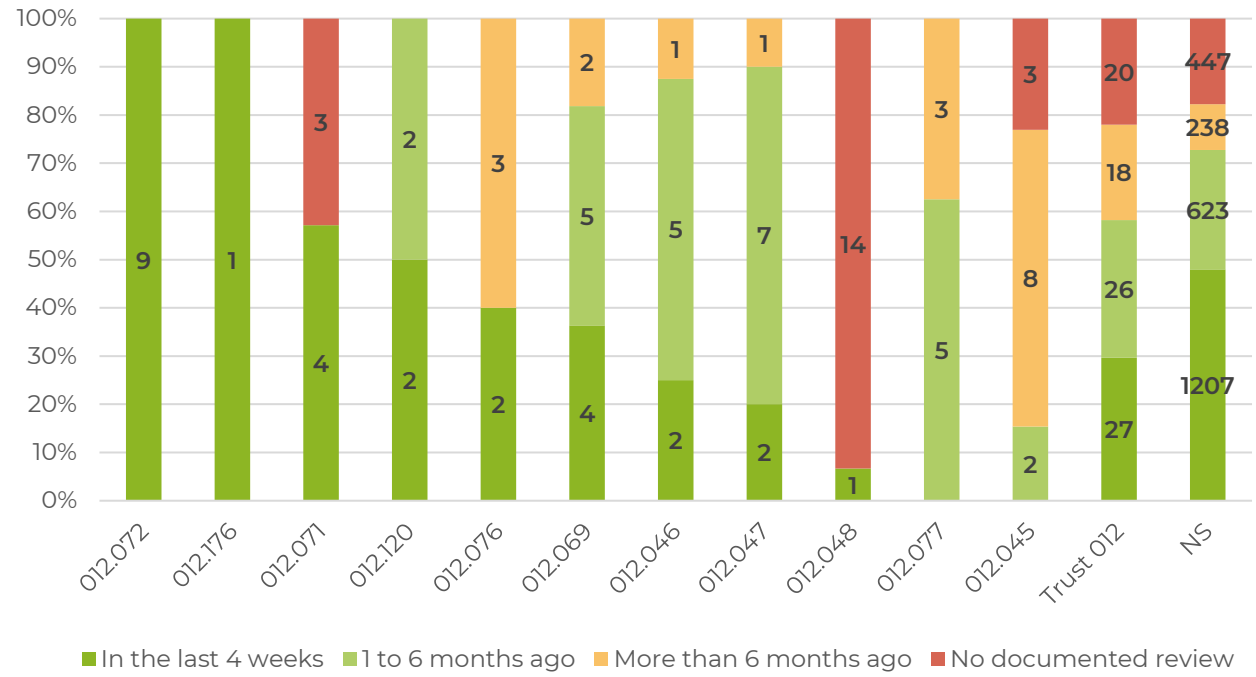


Figure 29b Documented review of the continuing need for an oral PRN prescription of an antipsychotic medication, a benzodiazepine or promethazine. National subsample of patients prescribed a PRN prescription for psychotropic medication in a non-acute adult setting and each of your Trust clinical team subsamples.



Where practice falls short of the standard, Trusts may like to review their systems for ensuring that prescriptions for oral PRN psychotropic medication are regularly reviewed, and that such reviews are documented. For example, whether it would be helpful if paper prescription charts/electronic prescribing systems included a pre-set time limit for such prescriptions, after which they are no longer valid unless re-authorised by the prescriber.

Appendices

Appendix A: Data use and management

Data control statement for POMH quality improvement programme 1h & 3e: Prescribing of antipsychotic medication in adult mental health services, including high dose, combined and PRN.

Data ownership and control

Control of the local data submitted to POMH is retained by the healthcare organisation that submitted them. These data have been made available to POMH in a way that is pseudonymous, with the exception of the identity of the source organisation. The aggregate data from all participating organisations are analysed by POMH to produce our customised reports. These reports summarise the national results and local results at organisation and clinical team level, benchmarked anonymously against the other organisations taking part.

Data Sharing

There is a publication strategy allowing POMH to publish the aggregated data on its web site and/or in appropriate scientific journals. Any organisations requesting these audit data will be referred to the POMH reports appearing in the public domain or provided with a list of member healthcare organisations and asked to approach them individually. It is each organisation's decision whether, and with whom, to share their data.

Data for Quality Improvement

Given that the data are collected for the purpose of quality improvement they are not necessarily representative of performance across the Trust. The use of data for ranking or judgement at an organisational level may therefore not be appropriate. Participation in POMH QIPs can be considered to indicate engagement in quality improvement. Relative and absolute performance against the practice standards should always be considered with the above caveats in mind.

Reflection by clinical teams on their benchmarked performance is perhaps the most potent element of POMH programmes. In addition to performance against the clinical standards, the audit data include demographic, diagnostic and other relevant clinical information that provide a context for interpretation and understanding of practice, which can inform local strategies and systems to achieve improvement. The data collected are designed to be suitable for this clinical purpose, and not for objective ranking of healthcare organisations, for which they are untested and would not necessarily be appropriate.

Privacy Notice

In accordance with the General Data Protection Regulation (GDPR) we have updated our privacy notice, which provides full details on how we use your data and the data submitted as part of a national clinical audit, along with our legal basis for doing so. Our privacy notice can be found online via the following link:

https://www.rcpsych.ac.uk/about-us/legal/data-protection/pomh-privacy-notice

This privacy notice is provided in addition to POMH's data control statement. The data collected by POMH are pseudonymous.

Appendix B: Participating Trusts

Avon and Wiltshire Mental Health Partnership NHS Trust
Barnet, Enfield and Haringey Mental Health NHS Trust
Belfast Health and Social Care Trust
Berkshire Healthcare NHS Foundation Trust
Betsi Cadwaladr University Health Board
Birmingham and Solihull Mental Health NHS Foundation Trust
Bradford District Care NHS Foundation Trust
Cambridgeshire and Peterborough NHS Foundation Trust
Camden and Islington NHS Foundation Trust
Cardiff and Vale University Health Board
Central and North West London NHS Foundation Trust
Cheshire and Wirral Partnership NHS Foundation Trust
Cornwall Partnership NHS Foundation Trust
Coventry and Warwickshire Partnership NHS Trust
Cumbria, Northumberland Tyne and Wear NHS Foundation Trust
Cwm Taf Morgannwg University Health Board
Cygnet Health Care
Derbyshire Healthcare NHS Foundation Trust
Devon Partnership NHS Trust
Dorset Healthcare University NHS Foundation Trust
East London NHS Foundation Trust
Elysium Healthcare Limited
Essex Partnership University NHS Foundation Trust
Forensic Network (Scotland)
Greater Manchester Mental Health NHS Foundation Trust
Herefordshire and Worcestershire Health and Care NHS Trust
Hertfordshire Partnership University NHS Foundation Trust
Humber Teaching NHS Foundation Trust
Kent and Medway NHS and Social Care Partnership Trust
Lancashire and South Cumbria NHS Foundation Trust
Leicestershire Partnership NHS Trust
Lincolnshire Partnership NHS Foundation Trust
Manx Care
Mersey Care NHS Trust
Midlands Partnership NHS Foundation Trust
NAViGO Health and Social Care CIC
Norfolk and Suffolk NHS Foundation Trust
North East London NHS Foundation Trust
North Staffordshire Combined Healthcare NHS Trust
Northamptonshire Healthcare NHS Foundation Trust
Northern Health and Social Care Trust
Nottinghamshire Healthcare NHS Trust
Oxford Health NHS Foundation Trust
Oxleas NHS Foundation Trust
Pennine Care NHS Foundation Trust
Rotherham, Doncaster and South Humber Mental Health NHS Foundation Trust
Sheffield Health & Social Care NHS Foundation Trust
Solent NHS Trust
Somerset NHS Foundation Trust
South Eastern Health and Social Care Trust
South London and Maudsley NHS Foundation Trust
South West London and St George's Mental Health Trust
South West Yorkshire Partnership NHS Foundation Trust
Southern Health and Social Care Trust
Southern Health NHS Foundation Trust
St Andrew's Healthcare
St Patrick's Mental Health Services
Surrey and Borders Partnership NHS Foundation Trust
Sussex Partnership NHS Foundation Trust
Swansea Bay University Health Board
West London NHS Trust
Western Health and Social Care Trust

Appendix C: Demographics of Trust samples

Figure 30: **Proportion of males and females**. Total national sample (n=7759) and each participating Trust/healthcare organisation sample.

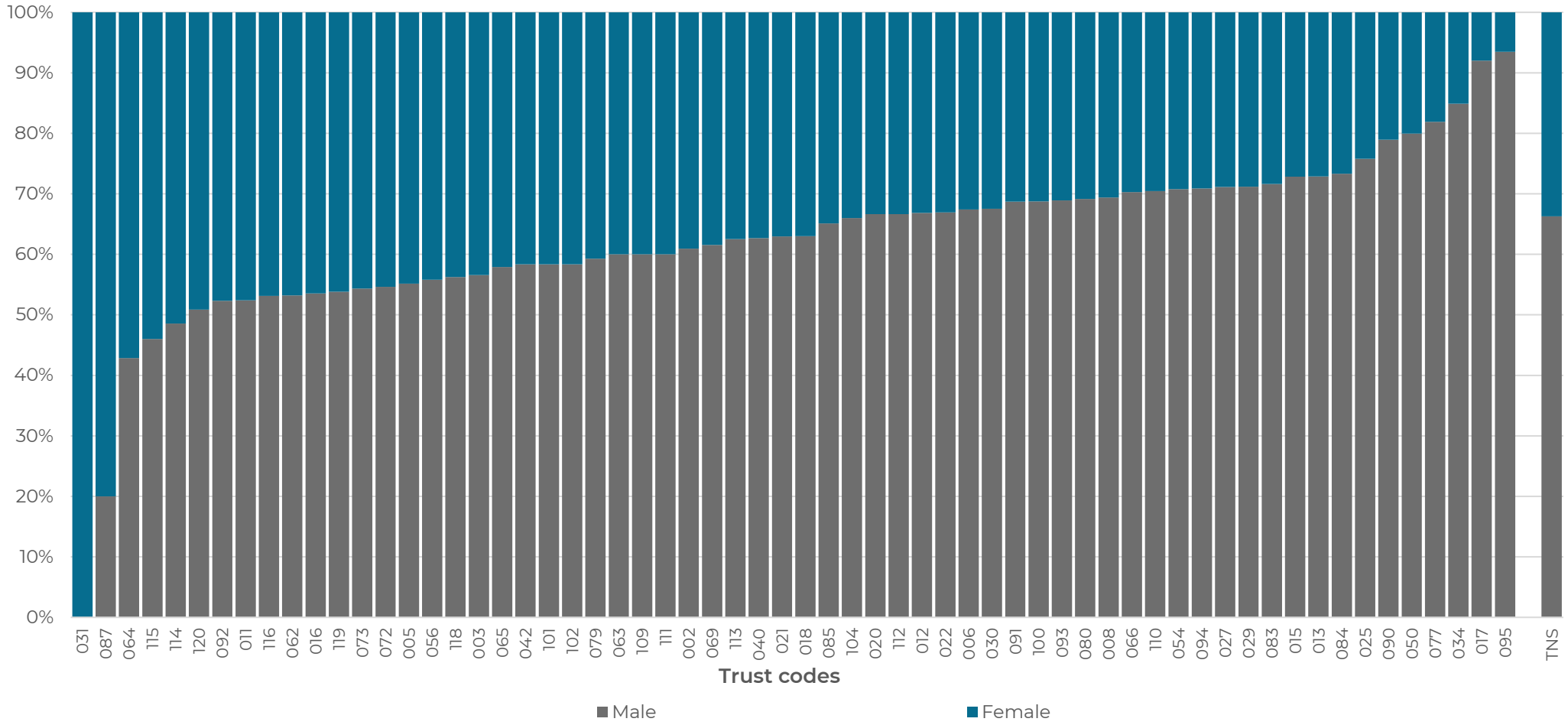


Figure 31: **Age bands**. Total national sample (n=7759) and each participating Trust/healthcare organisation sample.

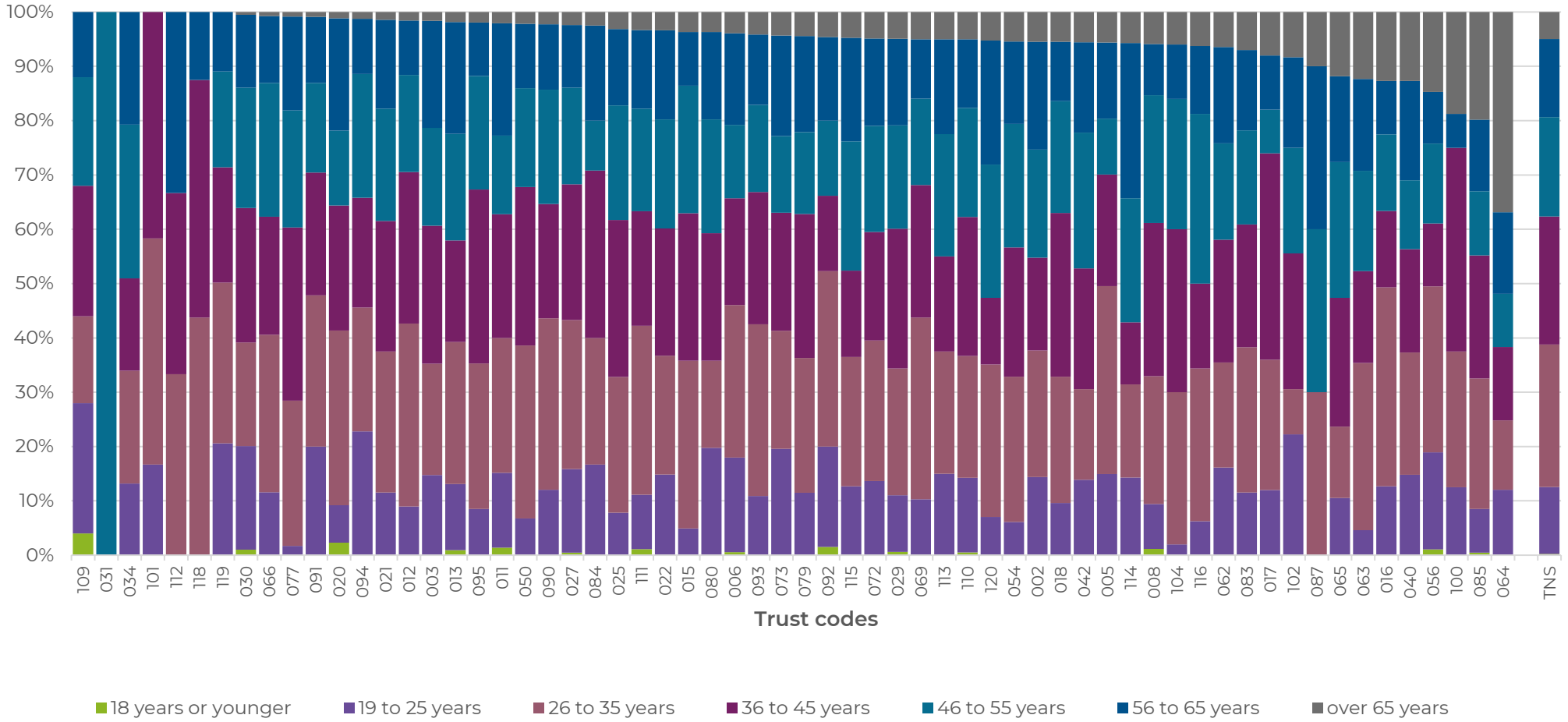
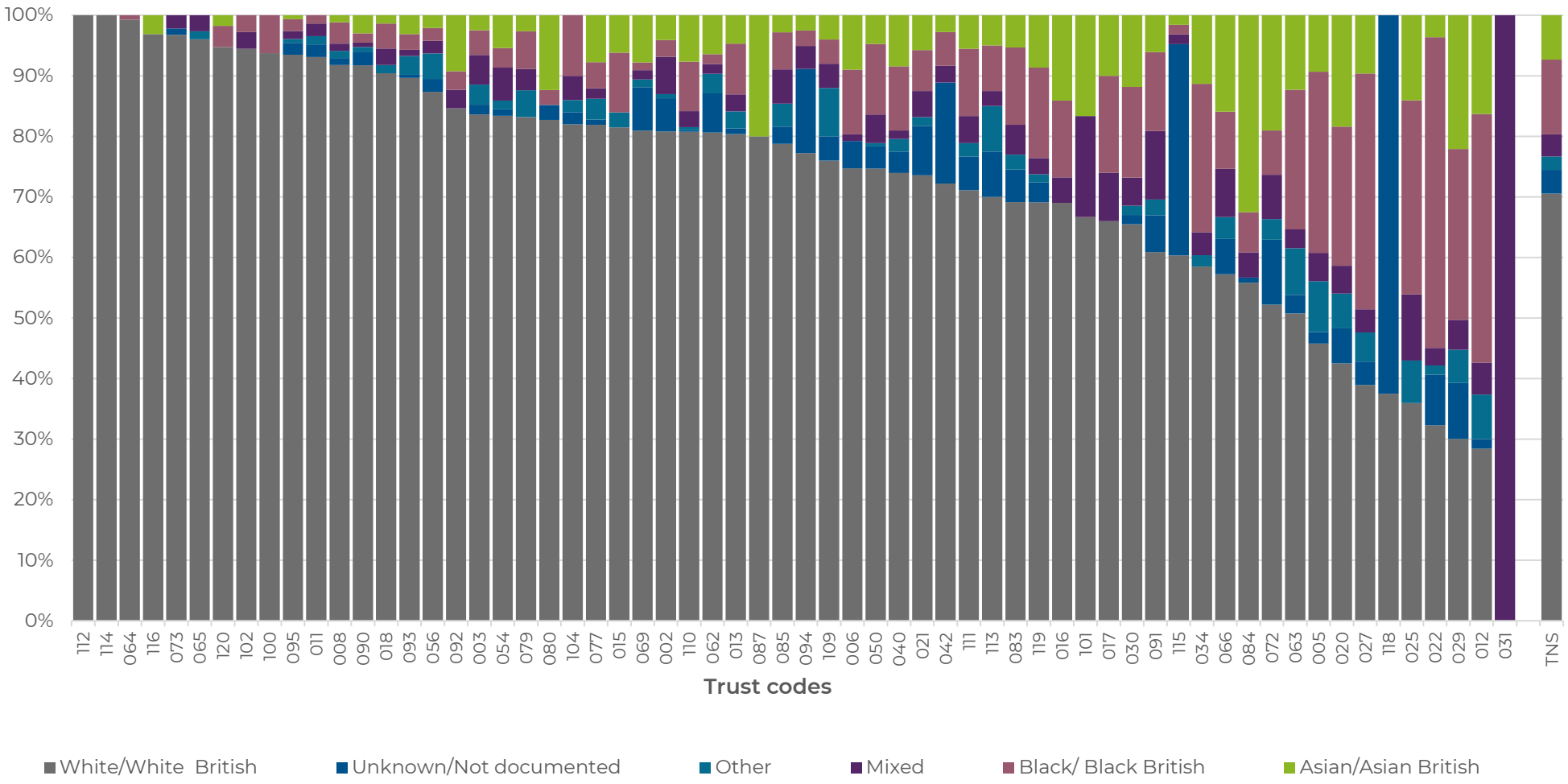


Figure 32: **Distribution of ethnic groups**. Total national sample (n=7759) and each participating Trust/healthcare organisation sample.



Appendix D: Audit data collection tool

This data collection tool relates specifically to the following quality improvement programme:

Prescribing of antipsychotic medication in adult mental health services, including high dose, combined and PRN

QI Topic 1h & 3e

Eligibility criteria

Eligible patients will be those currently prescribed **antipsychotic medication** as **inpatients**, under the care of **adult mental health services**, (including forensic services), irrespective of age. Patients under the care of other services, such as CAMHS, learning disability, and older people's services should not be included.

Collecting data

To complete this audit form, you should refer to the patient's clinical records. Clinical records include all electronic and paper notes, letters, and other patient information available to the clinical team. Given the nature of the information required to answer some questions, there may be the need to involve a doctor and/or pharmacist.

Before collecting data, please refer to the **Guidance Notes** at the end of this tool.

Submitting data

Data should be submitted online via the POMH Data Entry webpage. You will need your POMH username and password. Before submitting, please read the **Guidance for Online Data Submission** document, available on the POMH Data Entry webpage. If you realise that you have made a mistake in data submission, you will be able to correct this before the data entry period ends. To do this, you will need to ensure you keep a note of the receipt number displayed when the data were submitted. You will not be able to correct your submitted data after the data entry period ends.

To aid the data cleaning process, you may wish to keep a record of the patient ID on the front page of each paper form, for easier identification of cases (you cannot use the submission receipt number).

Data collection & entry starts: **1st March 2022***

Data entry closes: **4pm, 29th April 2022**

* Members may also submit data to POMH from the start of the data collection period – the two periods of data collection and entry are only separated here as a guide to help local planning.

Please contact the POMH-UK team if you have any questions or require further assistance.
Email: pomh-uk@rcpsych.ac.uk / Telephone: 0208 618 4010

Please note that this form is intended for use as part of the POMH-UK Topic 1h & 3e quality improvement programme only and may not be suitable for other purposes.

No.	Practice Standards	Related questions
1	Where regular high-dose or combined antipsychotic medication is prescribed there should be; • Documentation of the target symptoms/behaviours for such a treatment regimen. • Regular review of the clinical response, including the target symptoms/behaviours. • Monitoring of side effects/tolerability.	18a,b,c, 20 and 21
2	Prescription of oral PRN antipsychotic and/or benzodiazepine medication; • There should be a clear description of the symptoms/behaviours for which the PRN medication is indicated. • The maximum daily dose that can be administered should be specified. • The continuing need for such a prescription should be regularly reviewed.	23,25,27 and 29

Treatment Target	Related questions
Where regular antipsychotic medication is prescribed, the majority of patients should receive a single antipsychotic medication within the licensed dosage range.	14,15 and 17

The practice standards have been extrapolated from the following sources and agreed with expert clinical advisors

Barnes TRE, Drake R, Paton C et al. Evidence-based guidelines for the pharmacological treatment of schizophrenia: updated recommendations from the British Association for Psychopharmacology. Journal of Psychopharmacology 2020, 34;3-78

National Institute for Health and Care Excellence. Psychosis and schizophrenia in adults: prevention and management, NICE clinical guideline 178, 2014

Royal College of Psychiatrists (CR190), Consensus statement on high-dose antipsychotic medication. 2014. <http://www.rcpsych.ac.uk/files/pdfversion/CR190.pdf>

Data collection

In accordance with the General Data Protection Regulation (GDPR) we have updated our privacy notice, which provides full details on how we use your data and the data submitted as part of a national clinical audit, along with our legal basis for doing so. Our privacy notice can be found online via the following link:

https://www.rcpsych.ac.uk/about-us/legal/data-protection/pomh-privacy-notice

This privacy notice is provided in addition to POMH-UK's data control statement.

Please ensure that the data submitted are limited to data specifically requested by this tool and you do **not** supply any personally identifiable data, such as a service user's **name**, **full date of birth** or **NHS number**.

If you have any queries concerning the collection and use of personal data, please contact:
Gavin Herrington, Programme Manager Gavin.herrington@rcpsych.ac.uk

Trust and team information

Q1. Trust identifier
Your Trust identifier is a 3-digit code (e.g. 044)

N	N	N

Q2. Team identifier
Your team codes are known only to your Trust. The POMH-UK team does not know your team code.

N	N	N

Q3. Optional additional identifier
This field gives your Trust the option of identifying data by site, directorate, lead consultant, or any other relevant variable you wish. Your Trust can decide whether or not to use this field.
Enter any assigned numerical code in this field and keep a record for yourselves of what it means. If you don't want to use an additional identifier, simply leave this field blank.

Q4. Initials of data collector
Enter your own initials in this field (e.g. SB). This will enable your team to identify you, should we need to query something about the data that have been entered.

Patient information (complete for ALL patients)

Q5. Patient identifier
Please assign a numerical code to each patient on whom data are collected, for example Joe Bloggs=1, Jane Bloggs=2. Keep a record of these codes so you can identify patients should there be data cleaning queries.

N	N	N

Q6. Patient's year of birth
(YYYY e.g. 1988)

Y	Y	Y	Y

Q7. Patient's sex, as stated in the clinical records

☐ *Male* ☐ *Female*

Q8. Patient's ethnicity, as recorded in the clinical records (These are the standard NHS ethnicity categories currently in use)

- ☐ *Asian/Asian British (includes any Asian background e.g. Bangladeshi, Chinese, Indian, Pakistani)*
- ☐ *White British/Irish (includes any White background)*
- ☐ *Mixed or multiple ethnic groups (includes any mixed background)*
- ☐ *Black African, Black British or Caribbean (includes any Black background)*
- ☐ *Another ethnic group (includes any other ethnic group, e.g. Arab)*
- ☐ *Unknown/Not documented*

Q9. Patient's current clinical psychiatric diagnoses (ICD-10 categories)

(Please tick all that apply)

- ☐ *Organic, including symptomatic, mental disorders (F00-F09)*
- ☐ *Affective disorder, other than bipolar disorder (F30-F39)*
- ☐ *Personality disorder other than borderline /emotionally unstable personality disorder (F60-F69)*
- ☐ *Mental disorder not otherwise specified (F99)*
- ☐ *Mental and behavioural disorders due to psychoactive substance use (F10-F19)*
- ☐ *Anxiety, dissociative, stress-related, somatoform and other nonpsychotic mental disorders (F40-F48)*
- ☐ *Intellectual disabilities (F70-F79)*
- ☐ *None of the above diagnoses documented*
- ☐ *Schizophrenia, schizotypal, delusional disorders and other non-mood psychotic disorders (F20-F29)*
- ☐ *Behavioural syndrome associated with physiological disturbance and physical factors (F50-F59)*
- ☐ *Disorder of psychological development (F80-F89)*
- ☐ *Not known/not documented*
- ☐ *Bipolar disorder (F31)*
- ☐ *Borderline/emotionally unstable personality disorder (F60.3)*
- ☐ *Behavioural and emotional disorder with onset occurring in early childhood and adolescence (F90-F98)*

Q10. Which service/clinical team is currently responsible for this patient's care?

- ☐ *Acute adult inpatient team*
- ☐ *Inpatient complex needs service (including challenging behaviour)/inpatient rehabilitation service*
- ☐ *PICU ward team*
- ☐ *Forensic ward team*

Q11. Patient's current Mental Health Act status

- ☐ *Informal*
- ☐ *Formal: detained under the MHA*

Q12. Is this patient subject to consent to treatment legislation (CTL)?

- ☐ *Not subject to CTL.*
- ☐ *Subject to CTL. Patient consents. English section 58 (form T2) or Scottish or Irish equivalent.*
- ☐ *Subject to CTL. Patient does not or cannot consent. English section 58 (form T3) or Scottish or Irish equivalent.*
- ☐ *Receiving treatment that requires consent and a second opinion. English section 57 or Scottish or Irish equivalent.*

Current medication regimen

Q13. In addition to regular antipsychotic medication, is this patient also regularly prescribed any of the following medications? (Do not include PRN prescriptions)

If you are unsure about whether any prescribed medicines are benzodiazepines, antidepressants or anticholinergics, please ask a pharmacist or doctor.

- ☐ *A benzodiazepine*
- ☐ *An antidepressant*
- ☐ *An anticholinergic*
- ☐ *Valproate*
- ☐ *Lithium*
- ☐ *Carbamazepine*
- ☐ *Lamotrigine*
- ☐ *Promethazine*
- ☐ *None of the above*

Regular oral antipsychotic medication currently prescribed

Q14. Complete the dosage information for all oral antipsychotic medication currently regularly prescribed for this patient or confirm that no such medication is currently prescribed

Regular oral antipsychotic medication *(Please tick if prescribed)*	Total regular oral daily dose, mg
Amisulpride ☐	☐☐☐☐
Aripiprazole ☐	☐☐.☐
Asenapine ☐	☐☐
Cariprazine ☐	☐.☐
Chlorpromazine ☐	☐☐☐☐.☐
Clozapine ☐	☐☐☐.☐☐
Flupentixol ☐	☐☐.☐
Haloperidol ☐	☐☐.☐
Levomepromazine ☐	☐☐☐☐.☐
Lurasidone ☐	☐☐☐.☐
Olanzapine ☐	☐☐.☐
Quetiapine ☐	☐☐☐.☐
Risperidone ☐	☐☐.☐☐
Sulpiride ☐	☐☐☐☐
Trifluoperazine ☐	☐☐.☐
Zuclopenthixol ☐	☐☐☐
Other regular oral antipsychotic medication ☐	Name: ☐ Total regular oral daily dose, mg ☐☐☐☐.☐☐

☐ **Please tick this box if NO regularly prescribed oral antipsychotic medication is documented**

Depot/long-acting injectable antipsychotic medication currently prescribed

Q15. Complete the dosage information for any depot/long-acting injectable (LAI) antipsychotic medication currently regularly prescribed for this patient or confirm that no such medication is currently prescribed

LAI antipsychotic medication *(Please tick if prescribed)*	Regularly prescribed: IM dose (mg)	Regularly prescribed: Injection interval (weeks*)	Single or test dose only: IM dose (mg)
Aripiprazole ☐	☐☐☐	☐	☐☐☐
Flupentixol decanoate ☐	☐☐☐	☐	☐☐☐
Haloperidol decanoate ☐	☐☐☐.☐	☐	☐☐☐.☐
Olanzapine pamoate ☐	☐☐☐	☐	☐☐☐
Paliperidone palmitate ☐	☐☐☐	☐☐	☐☐☐
Risperidone ☐	☐☐☐.☐	☐	☐☐☐.☐
Zuclopenthixol decanoate ☐	☐☐☐	☐	☐☐☐
Other depot/LAI antipsychotic medication ☐ Name: ☐	☐☐☐.☐	☐	☐☐☐.☐

*Please count 'monthly' as every 4 weeks and '3-monthly' as every 12 weeks

☐ **Please tick this box if NO prescribed depot/LAI antipsychotic medication is documented**

Q16. Is any of the following information about the currently prescribed antipsychotic regimen included in the care plan/treatment plan/CPA documentation? *(See guidance notes)*

Please tick this box if this patient's care plan is not accessible			☐
Patient care plan accessible	Does not mention antipsychotic medication		☐
	Does mention antipsychotic medication	**Care plan includes** *(Please tick all that apply)*:	
		The name of the antipsychotic medication(s)	☐
		The daily dose(s) of the antipsychotic medication(s)	☐
		A schedule for clinical review	☐
		A schedule for monitoring side effects/physical health	☐
		None of the above	☐

Q17. Please indicate below into which category this patient's current, regularly prescribed antipsychotic medication falls:
Please refer to the 'Ready Reckoner V9' to calculate dose as % of BNF max *(Tick one box only. Also, see guidance notes)*

1 single antipsychotic medication	Daily dose does not exceed 100% of the recommended BNF maximum		☐	Go to Q22
	Daily dose is greater than 100% of the recommended BNF maximum		☐	Go to Q18a
2 or more antipsychotic medications	Combination includes clozapine	Total daily dose does not exceed 100% of the recommended BNF maximum	☐	Go to Q18b
		Total daily dose is greater than 100% of the recommended BNF maximum	☐	Go to Q18b
	Combination does not include clozapine	Total daily dose does not exceed 100% of the recommended BNF maximum	☐	Go to Q18c
		Total daily dose is greater than 100% of the recommended BNF maximum	☐	Go to Q18c

Question 18a applies only to those patients who are regularly prescribed a single antipsychotic medication at a dose greater than 100% of the BNF maximum.

Q18a. What clinical reasons for prescribing this medication regimen are stated in the clinical records?
(Please tick all that apply)

☐ Insufficient response in terms of symptoms and/or behavioural disturbance with antipsychotic monotherapy at standard dosage	☐ Poor relapse prevention at standard dose
☐ Management of persistent verbal or physical aggression towards others (including staff or towards property)	☐ Antipsychotic plasma level on a standard dose was measured and judged to be low
☐ Management of persistent aggression towards self (self-harm)	☐ Patient preference
☐ Other clinical reason, please specify:	☐ Reason is not documented or otherwise unclear (e.g. long-standing regimen)

Question 18b applies only to those patients who are regularly prescribed 2 or more antipsychotic medications and the combination includes clozapine.

Q18b. What clinical reasons for prescribing this medication regimen are stated in the clinical records?
(Please tick all that apply)

- ☐ Insufficient response to clozapine monotherapy in terms of symptoms and/or behavioural disturbance or poor relapse prevention
- ☐ Management of persistent verbal or physical aggression towards others (including staff or towards property)
- ☐ Management of persistent aggression towards self (self-harm)
- ☐ Mood stabilisation
- ☐ Patient preference
- ☐ Other clinical reason, please specify:
- ☐ Period of cross-over for 6 weeks or less while switching to or from clozapine
- ☐ Minimise or reverse weight gain
- ☐ Minimise effects on blood glucose/HbA1c
- ☐ Minimise effects on plasma lipids/cholesterol
- ☐ Minimise other side effects, please specify:
- ☐ Reason is not documented or otherwise unclear (e.g. long-standing regimen)

Question 18c applies only to those patients who are regularly prescribed 2 or more antipsychotic medications and the combination does not include clozapine.

Q18c. What clinical reasons for prescribing this medication regimen are stated in the clinical records?
(Please tick all that apply)

- ☐ Insufficient response of symptoms and/or behavioural disturbance or poor relapse prevention with antipsychotic monotherapy at a dose within BNF limits
- ☐ Insufficient response of symptoms and/or behavioural disturbance or poor relapse prevention with antipsychotic monotherapy at a high dose (i.e. above BNF maximum)
- ☐ Management of persistent verbal or physical aggression towards others (including staff or towards property)
- ☐ Management of persistent aggression towards self (self-harm)
- ☐ Patient preference
- ☐ Period of cross-over for 6 weeks or less while switching from one drug to another
- ☐ Other clinical reason, please specify:
- ☐ Mood stabilisation
- ☐ Minimise prolactin elevation
- ☐ Minimise or reverse weight gain
- ☐ Minimise effects on blood glucose/HbA1c
- ☐ Minimise effects on plasma lipids/cholesterol
- ☐ Minimise other side effects, please specify:
- ☐ Reason is not documented or otherwise unclear (e.g. long-standing regimen)

Q19. How long has the current high dose/combined antipsychotic regimen been regularly prescribed?

- ☐ *Less than 1 month – Go to Q22*
- ☐ *1 month to 3 months*
- ☐ *3 months to 6 months*
- ☐ *6 months to a year*
- ☐ *More than a year*
- ☐ *Unclear*

Q20. Since starting the high-dose/combined antipsychotic regimen, when was the <u>most recent</u> documented review that clearly addressed clinical response and/or medication adherence?

	In the last 3 months	3 months to 6 months ago	6 months to a year ago	Not addressed in the last year/unclear
Clinical response of the target symptoms/ behaviours	☐	☐	☐	☐
Adherence to the medication regimen	☐	☐	☐	☐

Q21. Since starting the high-dose/combined antipsychotic regimen, when were the following physical health and side effect assessments <u>most recently</u> documented? *(See guidance notes)*

	In the last 3 months	3 months to 6 months ago	6 months to a year ago	No assessment documented in the last year
Physical health measures				
Temperature	☐	☐	☐	☐
Pulse	☐	☐	☐	☐
Blood pressure	☐	☐	☐	☐
Body weight/BMI	☐	☐	☐	☐
ECG	☐	☐	☐	☐
Examination/assessment for movement disorder (extrapyramidal side effects)	☐	☐	☐	☐
Blood tests				
Full blood count (FBC)	☐	☐	☐	☐
Renal function tests (U&Es)	☐	☐	☐	☐
Liver function tests (LFTs)	☐	☐	☐	☐
Plasma glucose (or HbA1c)	☐	☐	☐	☐
Plasma lipids	☐	☐	☐	☐
Plasma prolactin level	☐	☐	☐	☐
CPK	☐	☐	☐	☐
Use of formal side-effect rating scale/checklist	☐	☐	☐	☐

Prescription of oral PRN antipsychotic, benzodiazepine medication or promethazine

When entering dosage information for oral PRN medication, enter the maximum mg that could be administered in a 24-hour period.

For example, if a patient is prescribed chlorpromazine 50-100mg 4 hourly PRN, the maximum mg a day that could be administered is 100mg six times a day, a total of 600mg.

Q22. Is this patient prescribed oral PRN antipsychotic medication?

☐ *Yes – Go to Q23* ☐ *No – Go to Q26*

Q23. Details of the oral PRN antipsychotic medication prescribed:

Oral PRN antipsychotic medication	Maximum daily dose (mg) that could be administered: Total mg per day	or: Maximum daily dose not specified	Circumstances/indications under which this medication may be administered are clearly specified? (See guidance notes): Yes	No/unclear
Aripiprazole	.	☐	☐	☐
Chlorpromazine	.	☐	☐	☐
Haloperidol	.	☐	☐	☐
Levomepromazine	.	☐	☐	☐
Olanzapine	.	☐	☐	☐
Promazine		☐	☐	☐
Quetiapine	.	☐	☐	☐
Risperidone	.	☐	☐	☐
Zuclopenthixol		☐	☐	☐
Other oral antipsychotic medication*	.	☐	☐	☐

***Please specify:**

Q24. When was this PRN antipsychotic medication most recently administered and was the reason for doing so documented on this occasion?
(See guidance notes)

When was the most recent administration of this prescribed oral PRN antipsychotic medication?		Is the reason for administration documented in the clinical records? Yes	No/unclear
In the last week	☐	☐	☐
1 to 4 weeks	☐	☐	☐
Not administered in the last 4 weeks	☐		

Q25. When was the most recent documented review of the continuing need for oral PRN antipsychotic medication? *(See guidance notes)*
Tick only one box, in the column which describes the ward providing care for this patient (see Q10)

Acute adult wards (including PICU)		All other non-acute adult clinical settings (including forensic)	
In the last week*	☐	In the last 4 weeks	☐
1 to 4 weeks ago	☐	1 to 6 months ago	☐
More than 4 weeks ago	☐	More than 6 months ago	☐
No documented review found for this admission	☐	No documented review found for this admission	☐

**If PRN antipsychotic medication was started less than a week ago, tick this box*

Q26. Is this patient prescribed oral PRN benzodiazepine medication or promethazine?

☐ *Yes – Go to Q27* ☐ *No – Go to end and submit form*

Q27. Details of the oral PRN benzodiazepine medication or promethazine prescribed:

Oral PRN benzodiazepine medication or promethazine	Maximum daily dose (mg) that could be administered		Circumstances/indications under which this medication may be administered are clearly specified? *(See guidance notes)*	
	Total mg per day	or Maximum daily dose not specified	Yes	No/unclear
Promethazine	☐☐☐.☐	☐	☐	☐
Clonazepam	☐☐.☐	☐	☐	☐
Diazepam	☐☐.☐	☐	☐	☐
Lorazepam	☐☐.☐	☐	☐	☐
Other oral PRN benzodiazepine*	☐☐☐.☐☐	☐	☐	☐

***Please specify:**

Q28. When was this PRN benzodiazepine medication or promethazine most recently administered and was the reason for doing so documented on this occasion? *(See guidance notes)*

When was the most recent administration of this prescribed oral PRN benzodiazepine medication or promethazine?		Is the reason for administration documented in the clinical records? Yes	No/unclear
In the last week	☐	☐	☐
1 to 4 weeks	☐	☐	☐
Not administered in the last 4 weeks	☐		

Q29. When was the most recent documented review of the current prescription for oral PRN benzodiazepine medication or promethazine? *(See guidance notes)*
Tick only one box, in the column which describes the ward providing care for this patient (see Q10)

Acute adult wards (including PICU)		All other non-acute adult clinical settings (including forensic)	
In the last week*	☐	In the last 4 weeks	☐
1 to 4 weeks ago	☐	1 to 6 months ago	☐
More than 4 weeks ago	☐	More than 6 months ago	☐
No documented review found for this admission	☐	No documented review found for this admission	☐

**If PRN benzodiazepine medication or promethazine was started less than a week ago, tick this box*

These data should be submitted online to POMH-UK by:

4pm, 29th April 2022

If you realise that you have made a mistake submitting the data on this form online, you are able to edit submitted data before the data entry period ends. Keep a note of the receipt number shown after submission. You will need this to access this submitted form to correct any data entry errors.

You will not be able to correct your submitted data after the data entry period ends.

For further information please contact POMH-UK@rcpsych.ac.uk

Guidance notes

Q16. Information about the currently prescribed medication regimen may be contained in different parts of the electronic patient record (EPR) depending on the clinical setting and the way the EPR is configured. The most common places to find this information are the care plan, treatment plan or CPA documentation. If you are unsure where this information should be stored, ask a member of the clinical team.

While the name and dose of any currently prescribed antipsychotic medication(s) will be evident from the prescription/ administration chart, please only answer this question in relation to the information contained in the care plan/ treatment plan/ CPA documentation.

Q17. Calculating doses as a % of the BNF maximum

Use the ready reckoner supplied with this audit tool to easily calculate whether a single or combination of the antipsychotic dose is within or greater than the 100% of the maximum recommended by the BNF.

Locate the drug name on the ready reckoner, look along the card to locate the prescribed dose: the % of the BNF maximum is at the top of the card directly above the prescribed dose. Repeat for any additional antipsychotics prescribed and add together the percentages. If the total percentage figure is less than or equal to 100%, this is a 'regular dose', if the total is greater than 100% this is a 'high dose'.
Ready reckoner

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 9.1
July 2021 - Always check you are using the latest version
POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK CCQI

Depot/long-acting injection and IM antipsychotics

Depot/LAI: dose calculated as mg/week
IM/inhaled: dose in mg/day

Percentage of BNF maximum adult dosage

		5	10	15	20	25	30	33	40	45	50%	55	60	67	70	75	80	85	90	95	100%
Aripiprazole	Long-acting										50										100
Flupentixol	Depot	20	40	60		100					200					300					400
Haloperidol	Depot							25			37.5			50							75
Olanzapine	Long-acting										75										150
Paliperidone *	Long-acting													25							37.5
Paliperidone Trevicta**	Long-acting																				43.75
Risperidone	Long-acting										12.5					18.75					25
Zuclopenthixol	Depot			100				200			300			400			500				600
Aripiprazole	IM							10			15			20							30
Chlorpromazine	IM		25			50					100					150					200
Haloperidol	IM					5					10					15					20
Levomepromazine	IM		25			50					100					150					200
Olanzapine	IM					5					10					15					20
Zuclopenthixol acetate***	IM													50							75
Loxapine	Inhaled										9.1										18.2

* Maintenance dose licensed to be given monthly. ** Formulation licensed to be given every 3 months. *** A maximum of 150 mg in any 48-hour period and a maximum cumulative dose of 400 mg in any two week period.

To calculate a total daily prescribed antipsychotic dose as a percentage of the BNF maximum: determine the percentage of BNF maximum dosage for each antipsychotic that is prescribed, and then sum the percentages. For example, for a person prescribed clozapine 400mg a day and oral haloperidol 5mg PRN up to 3 times a day, the respective percentages would be 44% and 75%, giving a total antipsychotic prescribed dosage of 119% of the BNF maximum.

Contact pomh-uk@rcpsych.ac.uk to order copies of this Ready Reckoner www.rcpsych.ac.uk/pomh

ANTIPSYCHOTIC DOSAGE READY RECKONER - VERSION 9.1
July 2021 - Always check you are using the latest version
POMH-UK PRESCRIBING OBSERVATORY FOR MENTAL HEALTH-UK CCQI

Oral antipsychotics
Dose in mg/day

Percentage of BNF maximum adult daily dosage

		5	10	15	20	25	30	33	40	45	50%	55	60	67	70	75	80	85	90	95	100%
Amisulpride	Oral							400			600			800			1000				1200
Aripiprazole	Oral							10			15			20							30
Asenapine	Oral					5					10					15					20
Benperidol	Oral							0.5			0.75			1							1.5
Cariprazine	Oral					1.5					3					4.5					6
Chlorpromazine	Oral		100	150			300				500		600			750					1000
Clozapine	Oral			150				300		400	450			600							900
Flupentixol	Oral			3				6			9			12				15			18
Haloperidol	Oral		2			5					10		12			15					20
Levomepromazine	Oral		100			250					500					750					1000
Lurasidone	Oral					37					74					111					148
Olanzapine	Oral					5		7.5			10					15					20
Paliperidone	Oral					3					6					9					12
Pericyazine	Oral					75		100			150			200							300
Pimozide	Oral		2		4		6		8		10		12								20
Promazine	Oral			150				300			400					600					800
Quetiapine*	Oral		75	100	150				300		375		450				600				750
Risperidone	Oral		2			4		6			8					12					16
Sulpiride	Oral			400				800			1200			1600			2000				2400
Trifluoperazine**	Oral		5		10		15		20		25		30		35		40		45		50
Zuclopenthixol	Oral		20		30			50						100							150

Q21. Please indicate whether there is documentation in the patient's clinical records of any of the physical health measures/examinations and blood tests listed in this question, whether they were conducted as part of a formal review or not. For example, if a patient has diabetes and HbA1c and lipids have been measured in the last month as part of the monitoring of this condition, select plasma glucose (or HbA1c) and plasma lipids in the last 3 months.

Some of these measures/tests listed in this question will be routine and/or required by local protocols and policies, whereas others are more patient-specific and discretionary.

Q23. This information can usually be found on the prescription itself or in the care plan. If you are unsure where to find this information, ask a member of the clinical team.

There is some subjectivity in whether the circumstances under which the medication may be administered would be considered to be clear or not. Pragmatically, 'if distressed by voices' or 'if agitated and confrontational' could be considered to be clear whereas no instruction at all or simply 'if needed' could be considered to be unclear.

Q24. If the patient is prescribed more than one oral antipsychotic PRN, answer this question in relation to the one most recently administered.

A record of any medication that has been administered will be found in either the paper prescription chart or in the Trust's EPMA (electronic prescribing and medication administration record) system.

The most common place to record the reason for administration is in 'progress notes' or other daily clinical records but individual Trusts or clinical services may have different systems. Check with the clinical team if you are unsure where to look for this information.

Q25. Review of the continuing need for PRN medication may be built into paper prescription charts or EPMA systems in that the prescription is automatically time limited. Review may also be documented in treatment plans or in daily progress notes. Ask a member of the clinical team if you are not sure what the system on the ward is.

Q27. This information can usually be found on the prescription itself or in the care plan. If you are unsure where to find this information, ask a member of the clinical team.

There is some subjectivity in whether the circumstances under which the medication may be administered would be considered to be clear or not. Pragmatically, 'if distressed by voices' or 'if agitated and confrontational' could be considered to be clear whereas no instruction at all or simply 'if needed' could be considered to be unclear.

Q28. If the patient is prescribed more than one oral antipsychotic PRN, answer this question in relation to the one most recently administered.

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The most common place to record the reason for administration is in 'progress notes' or other daily clinical records but individual Trusts or clinical services may have different systems. Check with the clinical team if you are unsure where to look for this information.

Q29. Review of the continuing need for PRN medication may be built into paper prescription charts or EPMA systems in that the prescription is automatically time limited. Review may also be documented in treatment plans or in daily progress notes. Ask a member of the clinical team if you are not sure what the system on the ward is.

Appendix E: POMH central team

Professor Thomas Barnes, Professor Emeritus, Imperial College London: Joint-Head POMH
Carol Paton, Honorary Research Fellow Imperial College London: Joint-Head POMH
Gavin Herrington: Programme Manager
Olivia Rendora: Deputy Programme Manager
Gaia Bove: Project Officer

Acknowledgements:
Shubhra Mace, Deputy Director of Pharmacy, South London and Maudsley NHS Foundation Trust

Dr Shubulade Smith, Clinical Director for the Forensic Service at South London and Maudsley NHS Foundation Trust

Appendix F: References

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