An Evaluation of New Models of Prescribing (NMOP):

Mental Health Home Treatment Team

November 2022

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Overview of New models of prescribing project

Introduction

Northern Ireland lacks mechanisms to allow some prescribers working at interfaces between primary and secondary care to prescribe treatments directly to their patients. This means that there may be duplication of work, with the original prescriber needing to work through the patient's General Practitioner (GP) to ensure that the required treatments are prescribed.

In order to address these issues, a transformation project led by the Health & Social Care Board/ Strategic Planning and Performance Group (HSCB/SPPG) and involving extensive stakeholder engagement, was established to scope out the arrangements that need to be in place to enable prescribers working at the interface to work in a more effective and autonomous way. The stakeholder engagement established key principles to enable New Models of Prescribing (NMOP) (Figure 1).

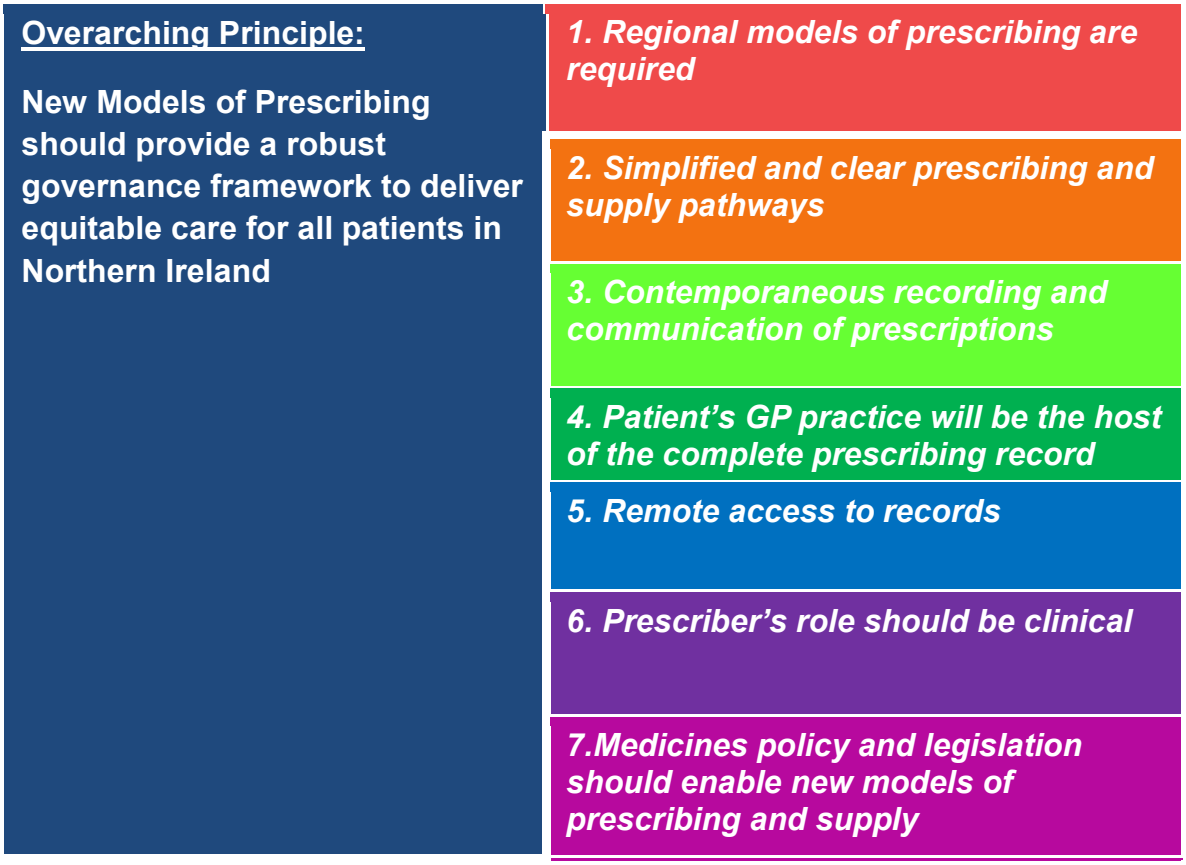

Figure 1: Agreed NMOP Principles

A number of pilot projects were initiated to explore the processes, governance and policy frameworks required for new models of prescribing (NMOP). The pilots included:

- Dietitian led direct ordering of oral nutritional supplements for care home residents
- Physiotherapist prescribing at the interface: community and outpatients
- Heart failure specialist nurse prescribing at the interface
- Mental health home treatment team (HTT): medical and non-medical prescribers.

The Medicines Optimisation Innovation Centre (MOIC) is a regional centre in Northern Ireland dedicated to delivering medicines optimisation to the population. MOIC were tasked with assisting in the evaluation of the NMOP pilot studies.

One of the pilot projects focussed on a Mental Health HTT; medical and non-medical prescribers. This report will describe the evaluation of that pilot. The terms of reference for the HTT project, which includes the Task and Finish Group membership, can be found in Appendix 1.

Context

HTT is an acute community mental health team based in the Belfast Health and Social Care Trust (BHSCT), providing a multidisciplinary approach to care for adult patients with acute mental illness. The team operates 24 hours a day 7 days a week and bridges the gap between community services and inpatient care for those with acute mental illness. HTT enables patients to avail of intensive medical and psychological intervention quickly, with an overall aim of preventing the requirement for inpatient care and supports patient recovery in their home setting. HTT also has a facility known as Home Treatment House, a 6 bedded unit licensed with Regulation and Quality Improvement Authority (RQIA) which meets nursing home standards. Suitable patients from the HTT caseload may be offered a place in this unit for several weeks to undergo a period of continuous monitoring and more intensive intervention. All patients remain under the care of their GP whilst they are involved with HTT including those staying in the Home Treatment House and as a result, supply of prescriptions and medicines are managed in primary care.

At the time of the pilot, there were 4 consultants working in HTT and 4 trainee medical staff consisting of a registrar, one speciality doctor, one core trainee and a locum F2 doctor. Patients are admitted to the caseload under the care of a consultant and staff are aligned to each of the consultants in clusters to provide continuity of care. The multidisciplinary team consists of community psychiatric nurses, social workers, occupational therapists, community and peer support workers and a mental health pharmacist non-medical prescriber.

There are approximately 720 admissions to HTT annually with a caseload of around 55 patients. HTT is staffed to manage a maximum capacity of 55 patients, however the caseload can fluctuate significantly and can reach as high as 80 during times of increased pressure on mental health services.

Following medical review of a patient, the psychiatry doctors may advise changes to the patient's psychotropic medicines. They may also advise on prescribing of medicines for physical health if they relate to the management of their mental health e.g. an antiemetic for nausea following a change to psychotropic medicine. This advice is communicated to the patient's GP practice using a hard copy Belfast Trust Treatment Advice Note and at the GPs discretion, a HS21 prescription is supplied to the patient.

Challenges – this process which relies on GPs issuing a HS21, following assessment by the HTT, can present the following challenges to medication management for patients, for example:

- **Urgent changes to dose or initiation of a new medicine** may occasionally be required at very short notice due to changes in the patient's mental state and presentation. HTT currently relies on the good will of GP practices expediting these requests
- **Access to medication out of hours-** including weekends, bank holidays and times that surgeries have reduced hours for staff training. Urgent requests for prescriptions may be directed to the GP out of hours services, however given the high demand on this service, the HTT try to minimise requests where possible.
- **Changes to dispensing frequency-** e.g. moving to twice weekly dispensing. Such changes are used to manage risk and may need to happen quickly.

Community Pharmacies will require a prescription with the new frequency to be issued by the GP before the new supply can be made.

- **Home Treatment House -** patients staying in the home treatment house are often some of the most unwell patients being managed outside of hospital. Patients' GP surgeries may be located anywhere in the BHSCT area, and this can cause delays to receipt of medicines.

Aims and objectives of NMOP HTT pilot evaluation

The aim was to complete an evaluation of the HTT pilot through joint working between MOIC and Health & Social Care Board (HSCB).[1]

The objectives were to:

Objective 1	Establish potential volume of prescribing activity that can be shifted to HTT prescribers
Objective 2	Identify benefits in relation to access to medication and reducing pressure on GPs
Objective 3	Support and enhance the delivery of tailored HTT interventions to patients, maximising professional skills at the point of care delivery
Objective 4	Support the delivery of care pathways that can be delivered by a HTT prescriber
Objective 5	Reduce delays in patients accessing medication thus providing greater opportunity to access the right medicines, at the right time, from the right person.
Objective 6	Support a reduction in the amount of unnecessary health care appointments and hospitalisations and promote faster recovery and self-caring.
Objective 7	Support improvements in patient / client concordance with taking prescribed medicines.

[1]On 31 March 2022 the HSCB was closed and its staff and functions migrated to the Strategic Planning and Performance Group (SPPG) of the Department of Health on the 1st April 2022

Evaluation methodology

An analysis plan linking project objectives to the collected data was co-produced by MOIC, HSCB and the clinicians participating in the NMOP pilot. Division of tasks under the plan was agreed between HCSB and MOIC (Appendix 2).

In line with the agreed analysis plan, the following outcome measurement and analysis was undertaken:

- **Stakeholder feedback sessions**: An agenda for a virtual feedback session was co-produced by HSCB and MOIC. Mentimeter software was used to capture quantitative agreement ratings and qualitative commentary from contributors. Qualitative feedback from participants was analysed using a theming approach. Average agreement ratings from the participants on how the pilot met the project objectives were obtained. All data has been summarised and is presented in this report.
- **Stakeholder survey**: A survey co-designed by HSCB and MOIC was launched via Citizen Space. Descriptive statistics were used to summarise responses. Qualitative feedback from participants was themed and tabulated.
- **Patient Satisfaction Questionnaire:** Patients receiving care as part of the NMOP pilot were invited to complete and submit a paper or electronic Patient Satisfaction Survey in person, via post or email. Descriptive statistics were used to summarise results. Direct quotes were extracted and presented.
- **NMOP audit activity**: Audit activity was collated using Microsoft Excel by the participating prescribers and compiled into a baseline and final database by the Lead Community Mental Health Pharmacist. Data was quality checked and re-categorised as necessary. These data were agreed by HCSB and MOIC. Descriptive statistics were used to summarise activity at the start and end of the pilot and results were tabulated. Additional supporting information were summarised in text.
- **Supply route process maps**: Clinicians participating in the NMOP pilot summarised the supply route at the start and end of the pilot. The main steps from the process at the start and at the end of the pilot were extracted from the text and summarised as a flowchart figure. Key findings were summarised.

- **Patient journeys**: Clinicians participating in the NMOP pilot summarised patient journeys prior to and during the pilot. The full summaries and key findings were presented in text.
- **Prescribing data** Monthly prescribing data (number of prescribers, number of prescriptions, number of items, cost of items, average cost of item and average cost of item per prescriber) from the start to the end of the pilot was summarised using descriptive statistics.
- Discussion points emerging from the analysis were formulated.

Results

Virtual stakeholder feedback session

Data from 10 stakeholders involved in the pilot was collected at a stakeholder feedback session. Those present included staff from BHSCT IT department (n=1), BHSCT team leaders (n=6), a mental health nurse (n=1), an operations manager (n=1) and a clinical director (n=1). During the stakeholder feedback session, agreement ratings on whether the pilot met the overall objectives of the project were collected using Mentimeter software this was analysed and presented using descriptive statistics presented in Table 1. In addition, discussion on a range of topics was documented via note takers directly into the Mentimeter software.

Mentimeter ratings

The stakeholders were asked “how strongly do you agree or disagree to the following statement” and asked to select a score from 1-5 (5 = strongly agree and 1 = strongly disagree). Overall, there was strong agreement that the pilot met the objectives of the project, with the exception of the objective relating to displacement of GP prescribing activity. Of note, GPs were not represented at the stakeholder session.

Table 1: Agreement ratings on whether the pilot met the overall objectives of the project

Question	Mean Score
This pilot project had robust governance arrangements put in place to ensure safe and effective prescribing	4.6 / 5
This pilot project provided a greater opportunity to access the right medicines at the right time from the right person	4.5 / 5
The pilot project maximised the use of professional skills at the point of care?	4.5 / 5
The pilot project displaced prescribing activity from GP practices	2.9 / 5
This pilot project supported a reduction in the amount of unnecessary health care appointments and hospitalisations and promoted faster recovery	3.5 / 5

Key themes were identified and a summary of the themes linked to the objectives are presented in Table 2 and further detail with supporting extracts in Appendix 3

Common themes were also summarised in a word cloud (Figure 2).

Table 2: Key themes identified from feedback provided at stakeholder workshop aligned with project objectives

Robust Governance Arrangements	**This pilot project provided a greater opportunity to access the right medicines at the right time from the right person**	**The pilot project maximised the use of professional skills at the point of care**	**The pilot project displaced prescribing activity from GP practices**	**This pilot project supported a reduction in the amount of unnecessary health care appointments and hospitalisations and promoted faster recovery**
Prescription security	Out of hours service delivery	Pharmacist NMP unable to prescribe	Efficient interactions across interface	Avoid hospital admission
Unable to print scripts	Patient / prescriber relationship	Trainee medics excluded	Avoid duplication	Stabilising symptoms
Remote prescribing	Patient access to advice	Clinical pharmacist support	Designated roles	Timely intervention
Cipher application process	Same day resolution to problems	Administrative duties	Home Treatment House medicines prescribed by HTT	
Multi-disciplinary team approach	Facilitated compliance aids			
Communication between HTT and GPs	Timely access			
React to therapeutic drug monitoring	Nurse support for families			
CP access to prescriber				

Figure 2. Key themes identified from stakeholder feedback

Key themes were identified from the stakeholder feedback in relation to the benefits and challenges and requirements for regional roll-out. Key themes were identified as presented in Table 3. A wide range of positives were reported including those for both clinicians (job satisfaction, clinical pharmacy support) and patients (patient access to specialist advice and management of side effects). Challenges that were encountered included issues with the electronic treatment advice note (eTAN), prescribing restrictions and off site prescription security. Stakeholders highlighted that optimisation of the technical solution, administrative resource, adequate clinical pharmacy support and a communication strategy would be required for roll out. Appendix 4-6 the direct extracts and comments from contributors that link to each theme.

Table 3: Positives, negatives and what was required for roll out: Key themes

Positives	**Challenges**	**Required for roll out**
Job satisfaction	Development of electronic treatment advice note (eTAN) interface	Technical solution
Project management	Duplication of eTAN and HS21	Administrative resource
Training	Regulatory limitations to remote working	Less restrictive prescribing criteria
Clinical pharmacy support	Prescribing restrictions	Non-medical prescribers
Patient access to specialist advice and timely interventions	Off-site prescription security	Adequate clinical pharmacy support
Patient/clinician relationship	Prescription form delivery	Communication strategy
Management of side-effects		Process for medical staff to obtain prescribing ciphers
		Out of hours access to service

Stakeholder feedback survey

An online survey was developed to obtain the views and experiences of a range of key stakeholders. The survey was circulated after the stakeholder feedback workshop. There were 9 responses in total (Table 4). 8/9 of the respondents (89%) worked in the locality where the pilot project was implemented.

Table 4: Respondents to stakeholder survey

Stakeholder	Number	Percentage
GP Pharmacist	4	44%
Other*	2	22%
HTT Prescriber	2	22%
GP	1	11%
Total	9	100%

n=1 community mental health nurse and n=1 HTT staff

Do you feel this pilot benefits the patient?

The majority of respondents (56%) felt that the HTT pilot benefitted the patient whilst 22% of respondents felt it didn't benefit the patient and a further 22% were unsure. Benefits included rapid access to acute medicines and reducing the length of time that the patient may be experiencing distressing symptoms. There were three negative comments relating to the electronic communication to the GP practice and the impact of changes to the patient's medication were delayed or missed. Those respondents providing negative or unsure responses represented GP practice staff. Key findings are summarised below and full responses to the survey question are detailed in Appendix 7.

Key Findings: Do you feel this pilot benefits the patient?
• Reduces delays in patients accessing acute medicines • Allows for timely intervention and alleviates distress • Patients symptoms stabilised faster • Welcomed by families that required changes to medication can be resolved same day • Patient accessing specialist advice regarding medication prescribed • Improved patient/specialist relationship

- Reduced need for hospital admission
- Issues regarding the electronic communication to the GP practice need to be resolved

Do you feel that the electronic communication to GPs was beneficial?

There were mixed views on the electronic communication to GPs. 44% of respondents felt it was beneficial, however 44% did not feel it was beneficial and 11% were unsure. Some respondents felt it was beneficial as it shared key information with the GP, it ensured less chance of transcription errors and was an efficient use of HTT staff time whilst ensuring that clients/patients received their medication in a timely fashion.

There were a number of comments regarding issues with the electronic communication. This included: the eTAN needs to be sent through as a priority request; it should be clear that it requires same day action; concerns that urgent prescription requests could be missed; and there was a perception that it added to the volume of documents being received by practice staff. Key findings are summarised below and full responses to the survey question are detailed in Appendix 8.

Key Findings: Do you feel that the electronic communication to GPs was beneficial?

- Efficient use of HTT staff time
- Less chance of transcription errors
- Worked well when actioned on time
- eTAN needs to be amended to make it clear that it is a priority
- eTANs not always actioned by GPs
- Inconsistent approach across practices in allowing General Practice pharmacists access to EDT worklist
- Issues regarding electronic communication with GP practices needs to be resolved

Are you happy for HTT medical prescribing to continue as per the pilot project?

Just over half of respondents (56%) were happy for HTT medical prescribing to continue as per the pilot project. These respondents felt the pilot had been successful and it was beneficial to the patient as they are able to get their medication in a timely fashion. The remaining respondents (44%) (1 GP and 3 GP pharmacists) stated they were not happy for the pilot to continue or were unsure. Some of the reasons for this included issues with electronic communication in the GP practice and the need to mark communication for urgent action to prevent any delays. Key findings are summarised below and full responses to the survey question are detailed in Appendix 9.

Key findings: I would be happy for HTT medical prescribing to continue as per the pilot project
• Pilot provides fast, helpful action for the patient • Assurance that eTANs are actioned by GPs in a timely manner is needed • Pre-population of the eTAN and development of stock phrases would be useful for HTT clinicians • Need to provide clarity to GPs on how urgent the commencement of the prescription is and ensure this is communicated between HTT and GP • Need to have distinguishable features on communication to GP to indicate need for urgent attention • GPPs need to receive correspondence for action in a timely manner

What do you think were the benefits of this project?

Two-thirds of respondents provided a response to this question. These can be viewed in Appendix 10. Responses included patients receiving urgent medication on the same day, efficent use of HTT staff time and electronic communication with the GP practice.

Feedback from the virtual stakeholder feedback discussion supported these findings. In addition, the virtual group discussion identified the further benefits of reducing the need for hospital admission, and providing reassurance to nurse practitioners and families that patients are getting their medication in a timely manner. Key findings are summarised below and full responses to the survey question are detailed in Appendix 10.

Key Findings: Benefits of this project

- Quick treatment for patient
- Electronic communication is faster
- Patients receiving urgent medication more quickly
- Less work for secretaries emailing and chasing up GPs with telephone calls

Additional feedback from the virtual stakeholder feedback discussion:

- Patient accessing specialist advice regarding medication prescribed
- Improved patient/specialist relationship
- Practitioner has more scope to intervene in an appropriate and timely way
- Patient's symptoms are stabilised faster
- Particularly beneficial on Fridays prior to weekend
- Welcomed by families of patients that required changes to medication. Change is undertaken on the same day
- Community Pharmacists are able to raise queries directly with HTT prescribers. This acts as a clinical safety net for prescribers
- Facilitated timely changes to lithium dosing based on therapeutic drug monitoring
- Less duplication of effort as GP not required to prescribe urgent medication

- Avoids need for multiple contacts with GP practice to ensure urgent script is issued

What do you think were the challenges associated with this project?

The majority (78%) of respondents to the stakeholder survey provided a response on the challenges associated with the pilot project. Some of the challenges identified included getting used to a new system, the uncertainty of what was required with the electronic communication to GP practices, especially if medicine was required urgently. As well as being highlighted as a positive of the project, electronic communication was also considered to be a challenge in the context of managing the volume of electronic documents within the GP practice setting.

Feedback from the virtual stakeholder feedback discussion also highlighted the challenges faced with the electronic communication. In addition, the virtual group raised the prescribing criteria being too restrictive, the inability to prescribe remotely, and an inconsistent approach across practices in allowing GPPs access to EDT worklist as challenges. A qualified pharmacist prescriber within the HTT was unable to prescribe due to restrictions within professional standards relating to remote prescribing, causing further challenges. Key findings are summarised below and full responses to the survey question are detailed in Appendix 11.

Key findings: Challenges

- Needs to be clear communication on the advice notes to state if medication has been given and intended treatment duration.
- GPPs were required to confirm details that were missing, e.g. duration, discontinued medications; by follow up telephone calls.
- No distinguishing features on the communication to indicate urgent same day requests - making it difficult to prioritise workload
- Getting used to new system

Additional feedback from the virtual stakeholder feedback discussion:

- Criteria for prescribing is too restrictive

- Unable to prescribe remotely
- Inconsistent approach across practices in allowing GPPs access to EDT worklist
- Unable to remove prescriptions from base due to prescription security standards
- Can only handwrite prescriptions
- Medics had to obtain cipher via NMP cipher allocation model which was counterintuitive
- Delivery of prescriptions by courier to incorrect location led to delay in a prescriber being able participate in project
- Only senior medical staff allowed to prescribe and no qualified Nurse prescribers in HTT at present
- eTANs are not always actioned by GPs in a timely manner
- Additional requirement on staff time to bring script from Mater hospital base to patient's home

What improvements/considerations should be made for full implementation?

Over half of the respondents (56%) advised on improvements / considerations for full implementation. Suggestions included ensuring GPs have a robust system in place to ensure the eTAN is actioned within an appropriate time frame and including 'urgent/same day action' on the subject line which appears in the inbox.

Feedback from the virtual stakeholder feedback discussion supported these findings, and included the need for an assurance that eTANs are actioned by GPs in a timely manner. It was also suggested that on-call medical staff should have access to HS21s, and that an electronic solution was required to enable printing of HS21s, access to patient records and remote prescribing. Key findings are summarised below and full responses to the survey question are detailed in Appendix 12.

Key findings: Improvements / considerations for full implementation
• GPs need a robust system in place to ensure eTAN is sent to the clinician to be actioned within the appropriate time frame. • Show Urgent/Same Day Action on the subject line • Need to clearly identify priority requests much better to GP practices Additional feedback from the virtual stakeholder feedback discussion: • Assurance required that eTANS are actioned by GPs in a timely manner • Security of prescriptions and printers to be considered • Enable remote prescribing and remote access to patient records • Prepopulate data fields on eTAN to save time and development of useful stock phrases • More streamlined IT interfaces with other systems • Have an electronic solution from start • Enable printing of prescriptions • Keep robust governance arrangements • Training of prescribers is key • Manage expectations of GPs

Additional comments

One third of respondents provided additional comments. These comments related to improving the communication to GP practices and suggested having a priority EDT system and medication change alerts. Key findings are summarised below and full responses to the survey question are detailed in Appendix 13.

Key findings: Additional comments
• Liaise with GPPs to discuss eTAN related issues • Have a priority EDT system and medication change alerts that go directly to pharmacist • Improvements needed to highlight the eTAN request to the GP

HTT NMOP audit activity

Between 16/02/2021 and 28/09/2021, 7 prescribers in the BHSCT were involved in the pilot. Prescribers were invited to submit activity from 1 week of their practice from before the start of the pilot and at the end of the pilot. The audit activity recorded the number of patients on the caseload at the start of the pilot and at the end of the pilot and this is presented in Table 5.

In February 2021 there were 47-51 patients assessed over the course any given week and a similar number (47-50) were assessed in September 2022. Despite the similar caseload in both data collection periods, the number of patient contacts in September were smaller. Possible reasons for this may be that patients were more stable, medication changes may have been carried out in the week prior to the data collection and consultations may have been undertaken by mental health practitioners who were not participating in the pilot.

Table 5: HTT prescribers audit results

	Baseline	Final
N of patients	28	16
N of patient contacts	32	19
N (%) of contacts per prescriber		
Consultant	18/32 (56%)	10/19 (53%)
Senior medical staff*	10/32 (31%)	5/19 (26%)
Locum or junior medical staff**	4/32 (13%)	4/19 (21%)
Consultation type per patient contact		
N (%) virtual	13/32 (46%)	2/19 (11%)
N (%) face to face	13/32 (46%)	11/19 (58%)
N (%) MDT discussion	6/32 (21%)	6/19 (32%)

*Registrar or speciality doctor prescriber

**Locum or junior medical staff not part of the pilot

There were 28 patients with 32 patient contacts at the baseline time point of the audit, and 16 patients with 19 patient contacts at the final time point of the audit, reflecting that some patients had multiple contacts.

Prescribers in the pilot included medical consultants and senior medical staff. Locum and junior medical staff, not involved in the pilot, also recorded activity at each time point. Comparing the final and baseline time points, the proportion of patient contacts in the consultant prescriber group decreased very slightly whilst the patient contacts seen by senior medical staff and locum or junior medical staff (not part of the pilot) increased.

At baseline, there was an equal proportion of virtual and face to face patient contacts. At the final time point, the majority of patient contacts took place face to face. The number of patient contacts involving MDT discussion increased from baseline to final time point.

A range of patients with severe mental illness including complex diagnoses were assessed and treated baseline and final time points (Appendix 15).

Overall, there were 33 medication changes recorded (across 32 patient contacts) at baseline and 13 medication changes (across 19 patient contacts) at the final time point of the audit. Table 6 presents the number of medications prescribed and deprescribed at baseline and final time points.

Table 6: Medication prescribed and deprescribed

	Baseline	Final	Change from start to end of audit
N (%) of medications prescribed	29/33 (88%)	11/13 (85%)	↓
N (%) of medications deprescribed	4/33 (12%)	2/13 (15%)	↑

There was a small reduction in the proportion of medications prescribed and a small increase in the proportion of medications deprescribed. The types of medications prescribed and deprescribed are summarised in Tables 7 and 8.

Table 7: New medications prescribed by therapeutic group

Therapeutic group	Baseline (n=29)	Final (n=11)
Antidepressant	3	1
Anxiolytic	8	4
Hypnotic	5	3
Antipsychotic	12	2
Mood stabiliser	0	1
Other	1	0

Table 8: Medications deprescribed

Medication name	Baseline	Final
Anxiolytic	2	0
Antipsychotic	2	0
Hypnotic	0	2

Table 9 summarises the main mechanisms used to achieve a change to medication for patient contacts at the baseline and final time points of the pilot.

Overall, from the start to the end of the pilot, there was an increase in the number of HS21s issued and a small reduction in the number of letter of recommendations issued indicating a reduction in this administrative burden in GP practices.

Table 9: Mechanism of prescription

Mechanism of prescription	**Baseline** (32 patient contacts)	**Final** (19 patient contacts)	**Change from baseline to final of audit**
N (%) Letter of recommendation	27/32 (84%)	15/19 (79%)	↓
N (%) Supply requested from OOH GP	2/32 (6%)	0/19 (0%)	↓
N (%) Supply requested from Hospital Pharmacy	3/32 (9%)	0/19 (0%)	↓
N (%) HS21 issued	0/32 (0%)	10/19 (53%)	↑
Not reported	1/32 (3%)	0/19 (0%)	↓

The urgency of medications and their date of issue on ECR at baseline and final time point in the audit, is summarised in Tables 10 and 11. From baseline to final time point of the audit, there was an increase in “same day” and “next day” medication issue and a decrease in non-urgent medications.

Table 10: Urgency of Medications

Urgency of medications category	**Baseline**	**Final**	**Change from baseline to final of audit**
N (%) same day	14/32 (39%)	8/19 (42%)	↑
N (%) next day	1/36 (3%)	8/19 (42%)	↑
N (%) not urgent	21/36 (58%)	3/19 (16%)	↓

Table 11: Date of issue on ECR

Days to issue on ECR	**Baseline**	**Final**	**Change from baseline to final of audit**
N (%) same day	13/32 (41%)	0/19 (0%)	↓
N (%) 1 day	8/32 (25%)	4/19 (21%)	↓
N (%) ≥ 2 days	4/32 (12%)	2/19 (11%)	↓
N (%) not reported	7/32 (22%)	13/19 (68%)	↑

The increase in the volume of prescriptions issued “same day” and “next day” (Table 10) at the final time point alongside the decrease in the volume of prescriptions with the date of issue on the same day on the ECR system (Table 11), may indicate that the HS21 facilitated an increase in the prescription on same day (i.e. urgent) medications whilst reducing the burden for the GP practice to action the “same day” prescription on the ECR.

Process Map

Table 12 summarises the number of steps in each pathway at the start and end of the pilot. On average the number of steps required reduced by 2 and the time taken by 75-91%. Appendix 16 details the full prescribing pathway at the start of the pilot and again at the end.

Table 12: Number of steps and time taken for each process

Measurement period	Number of steps	Time taken	Issues with the process	Benefits
Pre pilot	8 steps	6 hours – 2 days (depending on the urgency of the medication change and agreement to process urgent requests by the GP)	• No other method of prescribing apart from a letter of recommendation to the GP practice • Phone calls to the GP practice are time consuming for both the practice and HTT • If GP surgery is closed e.g. half day closure or limited staffing, then urgent requests may not always be processed • Email communication is not the most appropriate method of communication with primary care due to governance risks • Multiple staff involved in both primary and secondary care, therefore, less efficient use of staff resource.	
End of pilot	6 steps	1.5 - 4 hours (depending on patient or patient representative's ability to collect or practitioner	• There is additional work required by the HTT prescriber to complete both HS21 and eTAN when changing medication • Hand writing of prescriptions is not ideal, no electronic record of the HS21 available apart from scanning a copy of the prescription for records	• Ability to commence medication very quickly • Confidence that the patient has collected their prescription or it has been given to them by the HTT practitioner, rather than having to contact the patient or GP to check

		availability to deliver to the patient).	• Difficulties with GP practices accessing the eTAN and continuing the prescribing. This step has not been smooth and requires a lot of follow up from the HTT pharmacist. Work has been ongoing to improve this communication • Geographical distance of some patients to the HTT base to collect their prescriptions and access to parking facilities at HTT base.	• Ability to prescribe at times when it would be difficult to get a prescription from the GP e.g. Friday afternoons or half day closures at GP practices • Link up from the Paris system to ECR and GP system was required to commence the pilot and has provided a means for secure transmission of documentation.

Patient journeys

HTT members participating in the NMOP pilot submitted patient journeys, which emerged during the pilot. Table 13 and 14 summarises the key findings from 2 examples.

Table 13: Patient Journey 1

Patient One

- 25 year old female
- Referred from assessment centre to HTT in July 2021; initial impression of anxiety and possible evolving psychosis
- Accepted by HTT for further assessment of mental state
- Complex presentation
- The acting consultant psychiatrist attended the patient's home at 5pm on a Wednesday evening and following a mental state assessment determined that the patient was floridly psychotic
- The patient was willing to take medication at this time and a HS21 was completed by the doctor for quetiapine to commence. A treatment advice note was sent to the GP advising on further instructions for antipsychotic titration following this
- The patient was able to commence treatment that evening, with HTT supporting the patient in getting the prescription dispensed.

Key Findings

- The prescriber found NMOP invaluable in their work with acutely ill patients
- The prescriber does not currently work Thursdays in clinic. Without the availability of HS21 prescriptions they would have had to leave instructions for other team members to communicate with GP, disrupting several professionals' clinical time regarding a patient they had little current knowledge of in order to start medication.
- Prior to this NMOP pilot, the prescriber was phoning GP colleagues several times per week to arrange urgent changes of medication
- A much more efficient way of completing the changes of medication. It gives patient timely access without added stress for them or relatives to follow up their prescriptions with the GP practice that may not be ready in the same timeframe.

Table 14: Patient Journey 2

Patient Two

- 30 year old female patient, 26 weeks pregnant
- Admitted to HTT caseload with a hypomanic relapse of Bipolar Affective Disorder
- Patient's mental state deteriorated with reduced insight and increasing irritability towards family members
- The psychiatrist completed an HS21 to increase her quetiapine XL 400mg to quetiapine XL 700mg at night, arranging for her mother to collect the prescription from HTT office that evening
- When staff met with the patient's mother she was tearful and staff spoke with her for around thirty minutes. Collection of the HS21 was an opportunity for her to express her concerns and she was appreciative of same
- Her mother was appreciative of being able to collect a prescription and then get medication on the same day for her daughter in the hope it would prevent her daughter being admitted to hospital
- The mother advised that her daughter had two children and this was another contributing factor as to why the family were hoping she could be treated at home with HTT involvement and family support
- Unfortunately, the patient's mental state deteriorated rapidly in the following days and she was subsequently detained under the Mental Health Order and admitted to hospital.

Key Findings

- Issuing a HS21 does not always guarantee that admission to hospital can be prevented but does allow another mechanism to rapidly treat patients at home to reduce this risk
- Access to HS21 prescriptions also provides reassurance and support to family and carers that medication can be accessed quickly for their loved ones.

Patient Satisfaction Survey

A patient satisfaction questionnaire was developed to obtain the views and experiences of patients during the pilot period. A link to the questionnaire was sent to patients to complete shortly after they had been seen by HTT staff. On some occasions, the patient's family or carer assisted with the completion of the survey. There were 16 respondents in total. (Table 15).

Table 15: Respondents to patient satisfaction questionnaire

	Number	**Percentage**
Patient	6	38%
Family/friend/caregiver	10	63%
Total	16	100%

A number of questions were asked in the survey to which the patient was asked to agree or disagree (Table 16).

Table 16: Patient responses to patient survey questions

Question	**Yes**	**No**	**Not Sure**
1. Were you aware that the turnaround for prescriptions from your GP is usually at least 48 hours?	94%	-	6%
2. Were you aware that you were issued with an emergency prescription by the HTT and not your GP?	94%	6%	-
3. If you answered yes to the previous question, was the reason for issuing an urgent prescription directly from the HTT clearly explained to you?	100%	-	-
4. Do you think you benefited from obtaining your prescription this way?	100%	-	-
5. Did you find the process of getting your prescription straightforward?	94%	6%	-
6. Were there any disadvantages to obtaining a prescription in this way?	13%	88%	-
7. This is a pilot scheme; do you think the HTT prescribing should become a permanent service?	100%	-	-

One respondent (6%) answered 'No' when asked if they found the process of getting their prescription straightforward. This was due to having to wait until they saw the doctor before the script was issued.

A small number (13%) of respondents felt there were disadvantages to obtaining a prescription via the HTT pilot. One patient was dissatisfied with the length of time between the request and receiving the tablets. Another patient faced difficulties in obtaining the HTT prescribed medication due to stock issues at their usual pharmacy and a second pharmacy being unable to supply the medication as the patient received their usual medication in a blister pack. When the medicines were received the next day, the patient was reluctant to take them due to a further deterioration in their mental state.

Each respondent was asked to identify how the consultation benefitted them. Results are presented in Figure 3.

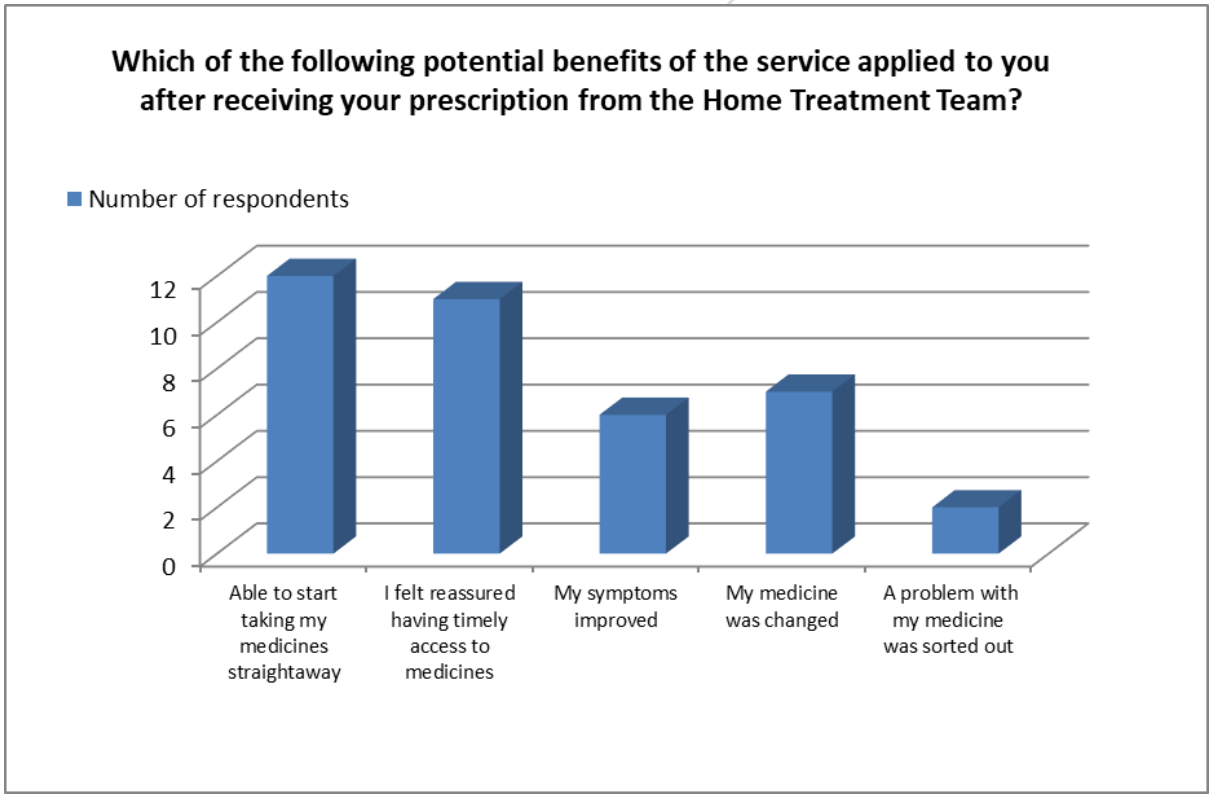

Figure 3: Patient responses to the benefits of the consultation

Some respondents (n=;44% included comments on how the service could be improved upon (Appendix 14).

Key findings from the patient survey are summarised below.

Patient survey: Key findings
• Patients were aware of the process and understood they were receiving their medication from HTT rather than their GP. • Patients would like to see this pilot become a permanent service. • A wide range of patient perceived benefits were reported. • Steps should be taken to ensure patients receive medication in a timely fashion and avoid any delays where possible.

Summary of prescribing data

Prescribing data relating to items prescribed by HTT medical prescribers and dispensed by Community Pharmacies between May and September 2021 were provided by the Business Services Organisation and are presented in Table 17 and Figures 4 and 5. The number of prescribers issuing prescriptions each month ranged between 3 and 6 with an average of 5 active prescribers per month. The volume of prescribing peaked during July 2021 and averaged at 35 items per month with a total of 176 items issued over the course of the pilot (average = 29 items per prescriber). The associated costs averaged at £180.97 per month peaking at £596.77 in September. However, it should be noted that one item accounted for the majority of this cost (antipsychotic depot injection cost £393). The average cost of a prescription item during the pilot was £5.14 and the average cost of items prescribed per prescriber per month was £33.51.

Table 17: Prescribing volume and costs

Month	No. of prescribers	No. of items	Cost of items (£)	Average £ / item	Average £ / prescriber
May 2021	3	5	£3.42	£0.68	£1.14
June 2021	6	33	£47.17	£1.43	£7.86
July 2021	6	64	£118.58	£1.85	£19.76
August 2021	6	38	£138.92	£3.66	£23.15
September 2021	6	36	£596.77	£16.58	£99.46
Average	**5**	**35**	**£180.97**	**£5.14**	**£33.51**
Total		**176**	**£904.86**		

Patients from 42 GP practices across BHSCT locality, received prescriptions between May 2021 and September 2021. Each of the practices had between 1 and 4 patients receiving HS21s. The number of items prescribed per patient contact during the time period by HTT ranged between 1 and 10.

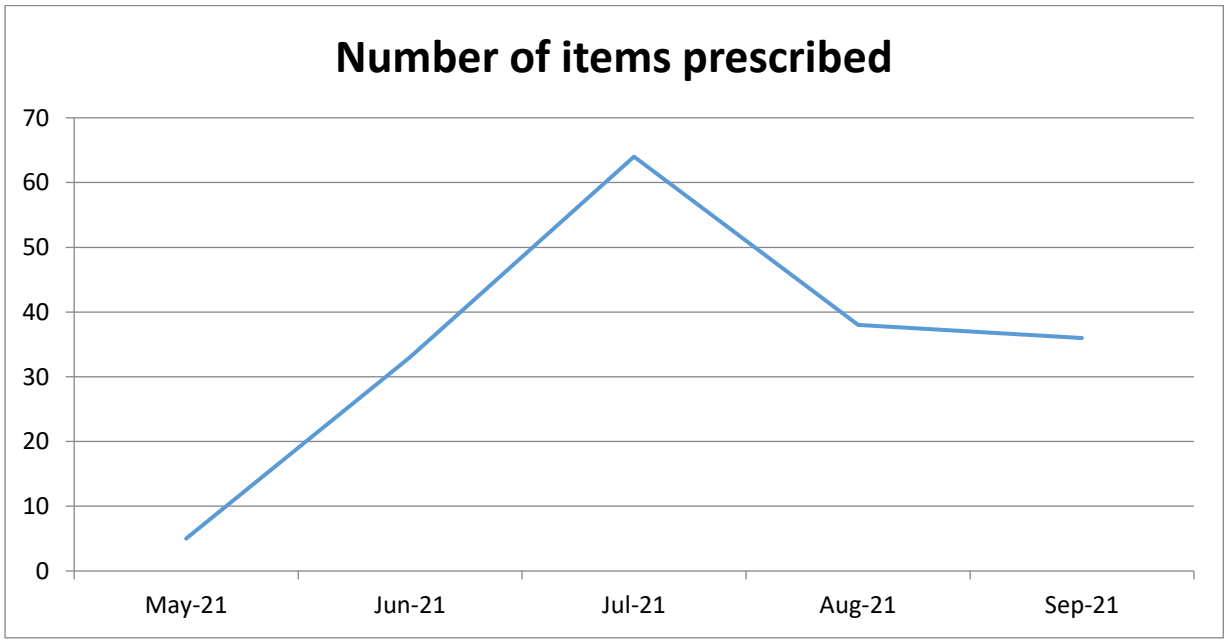

Figure 4: Number of items prescribed by HTT medical prescribers (May-September 2021)

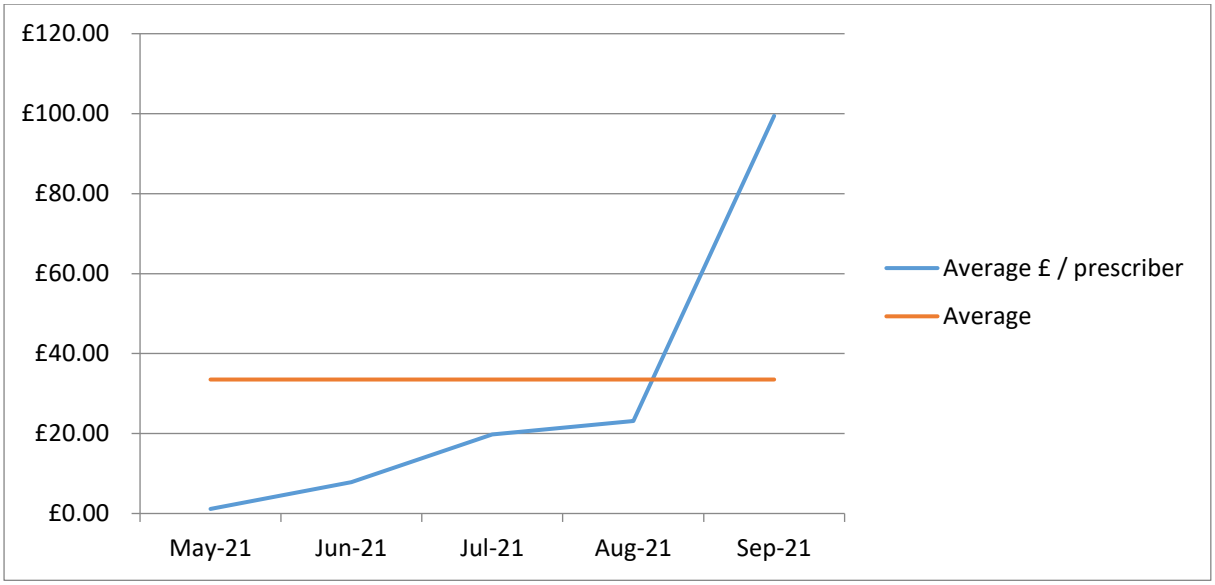

Figure 5: Average cost of prescribing per month

A total of 176 medicines were prescribed during the pilot period. These were categorised into therapeutic groups and are presented in Figure 6. Hypnotics and anxiolytics were the most commonly prescribed medicines.

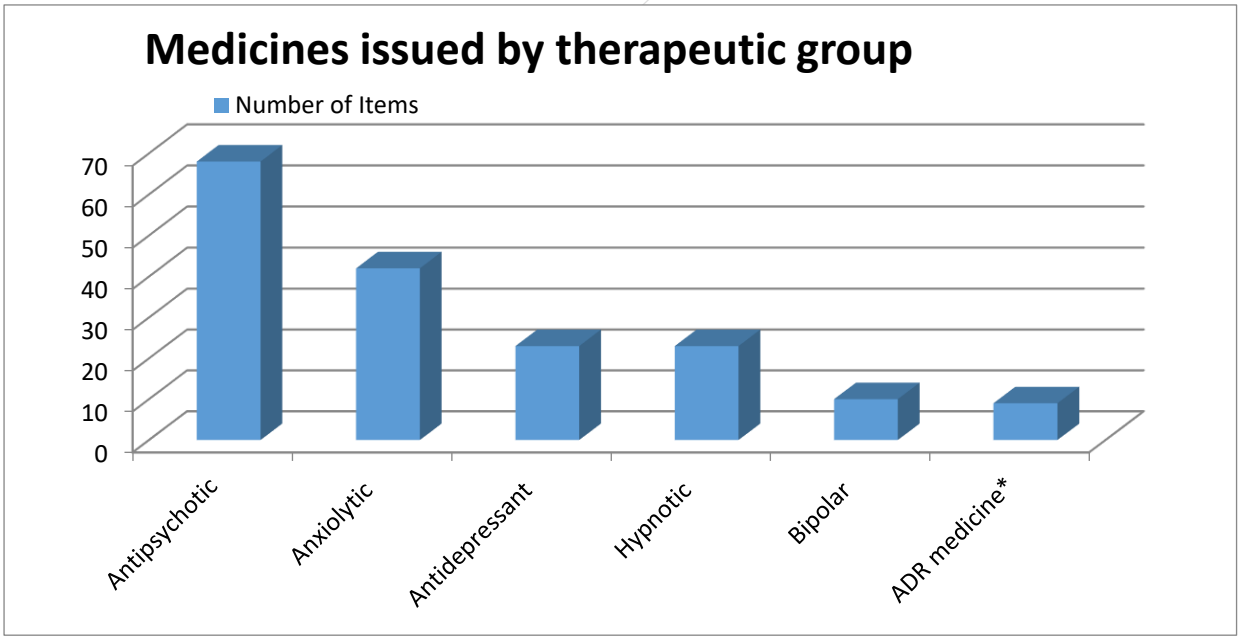

Figure 6: Number of items prescribed by therapeutic category

****ADR medicine is a treatment prescribed to manage side-effects caused by another medicine issued to manage mental health conditions / symptoms***

Medicines prescribed by HTT medical prescribers were reviewed to determine compliance with NI Formulary choices (for those therapeutic areas for which a formulary exists). Best practice guidance indicates that clinicians should aim for at least a 70% compliance rate with medicines' formularies. Figure 7 indicates the formulary compliance achieved. Compliance for antipsychotics and bipolar medicines could not be calculated as formulary choices are not listed in the NI Formulary. Notes for these sections indicate that conditions treated by these medicines should be initiated by specialist clinicians only. All HTT medical prescribers participating in this pilot project are considered to be specialist clinicians.

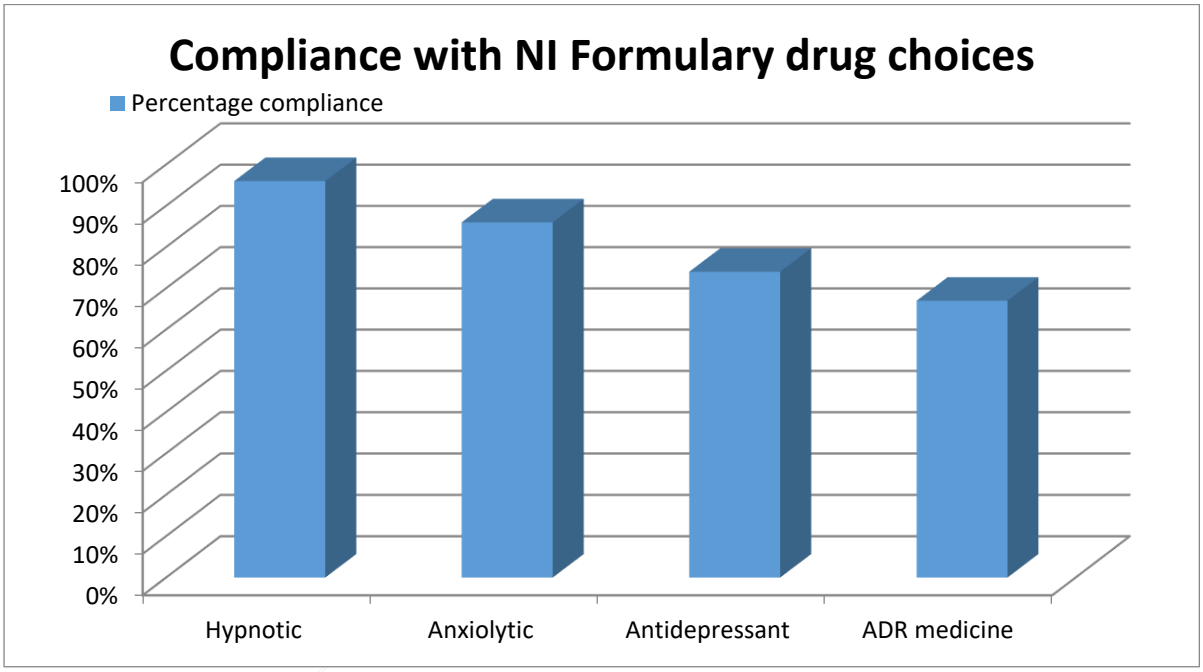

Figure 7: Compliance with NI Formulary

Conclusion

Northern Ireland lacks mechanisms to allow some prescribers working at interfaces between primary and secondary care to prescribe treatments directly to their patients. The HTT is an acute community mental health team which bridges the gap between community services and inpatient care for those with acute mental illness. Medicines management in the service can rely upon GPs issuing an HS21, following assessment by the HTT which can present many challenges including lack or reliable access to urgent medication changes, access to medication out of hours and changes to dispensing frequency. This transformation project, led by the HSCB was established to scope out the arrangements that need to be in place to enable prescribers working at the interface to work in a more effective and autonomous way.

In this evaluation, there was strong agreement that the pilot met the overall objectives of the project, putting in place robust governance arrangements, providing greater opportunities to access the right medicines at the right time for the right person, and maximising professional skills at point of care.

The feedback session found that the majority of HTT prescribers involved felt that the pilot benefitted both patients and prescribers, with increased patient access to specialist advice and management of side effects; as well as increased job satisfaction, training and improved patient and clinician relationships. The stakeholder's survey echoed this, with the majority of stakeholders reporting a range of positive impacts including reduced delays for patients accessing medicines, faster stabilisation of patient's symptoms and reduced need for hospital admissions.

Whilst the audit activity in this pilot showed overall little change in the volume of medications prescribed or deprescribed with the introduction of HS21 forms, it did show an increase in issue of same day and next day prescriptions and a modest reduction in the number of letters of recommendations issued. This demonstrated delivery for patients and reduction of some administrative burden on GPs in the issue of medications. Furthermore, following the introduction of HS21 prescriptions, there was a reduction in the number of steps taken to access medicines and corresponding marked reduction in time taken to carry out the process. This clearly demonstrated pathway redesign, with processes becoming more efficient. Patients reported high

levels of satisfaction and a wide range of benefits from the NMOP service indicating that practices in the pilot followed a patient centred approach.

The number of prescribers and volume of prescribing and associated costs increased and stabilised during the course of the pilot. High levels of formulary compliance across a range of therapeutic categories were achieved amongst clinicians.

Importantly, key challenges were highlighted by stakeholders with a 44% proportion of stakeholders reporting that they were unsure or felt the pilot didn't benefit patients. Challenges reported centred around implementation of the process including familiarity with new process, duplication of work with eTAN and HS21, off site prescription security and prescription form delivery issues. Stakeholders reported mixed success with the method of electronic communication between HTT prescribers and GPs and underlined that improvements would be required to optimise the process.

Overall, over half (56%) were happy for HTT prescribing to continue as carried out in the pilot, which underlined that whilst there were benefits delivered, improvements would be required for full implementation. A range of recommendations for roll out were suggested by stakeholders focusing on better communication channels between HTT prescribers and GPPs via the eTAN and better demarcation of prescription urgency. These suggestions serve as learning points for the further scale-up of NMOP activity.