Health and Social Care

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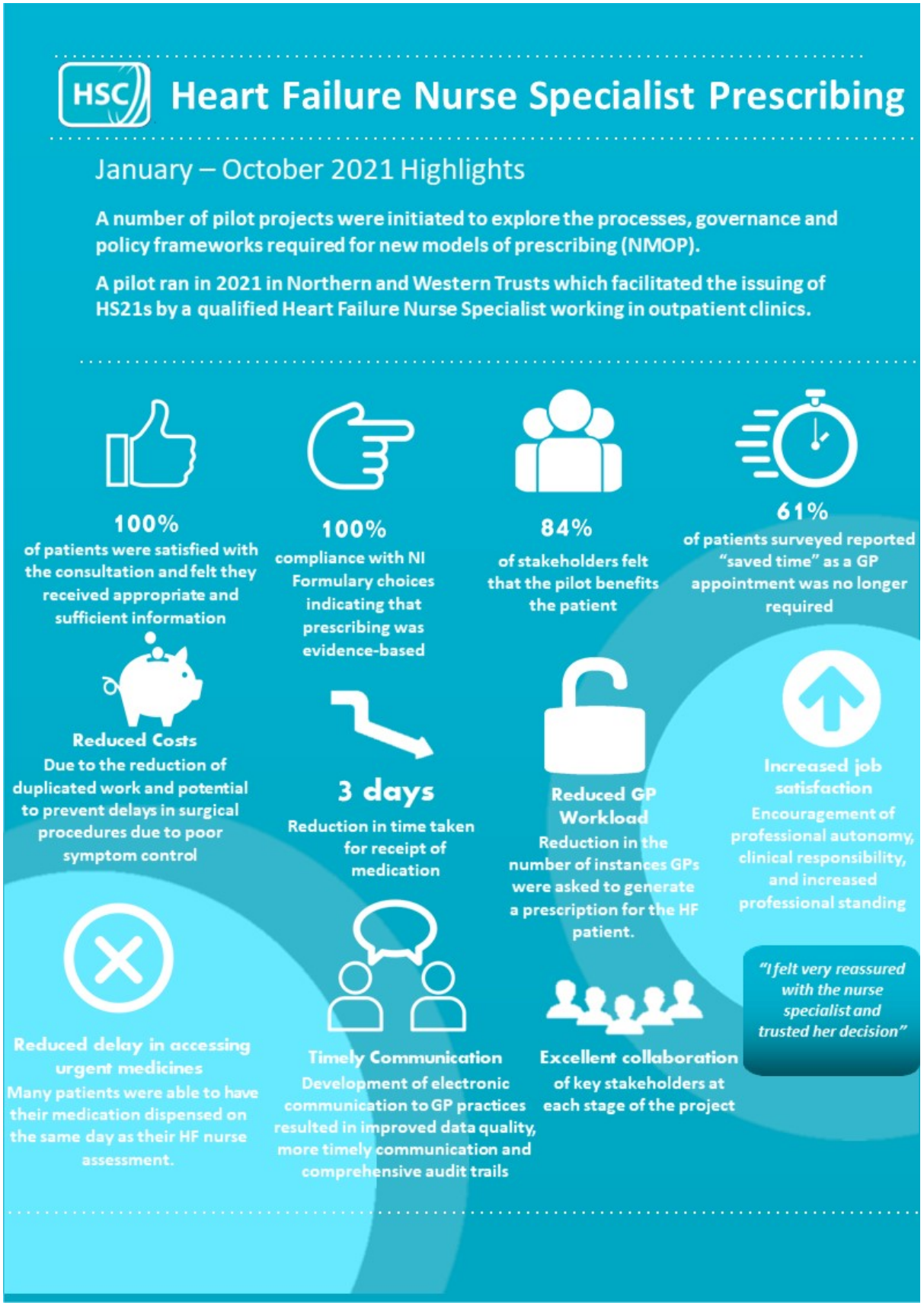
REVIEW AND RECOMMENDATIONS FOR NEW MODELS OF PRESCRIBING

A Heart Failure Nurse Specialist Prescribing Pilot

September 2022


HSC
Heart Failure Nurse Specialist Prescribing
January – October 2021 Highlights
A number of pilot projects were initiated to explore the processes, governance and policy frameworks required for new models of prescribing (NMOP).
A pilot ran in 2021 in Northern and Western Trusts which facilitated the issuing of HS21s by a qualified Heart Failure Nurse Specialist working in outpatient clinics.
100%
of patients were satisfied with the consultation and felt they received appropriate and sufficient information
100%
compliance with NI Formulary choices indicating that prescribing was evidence-based
84%
of stakeholders felt that the pilot benefits the patient
61%
of patients surveyed reported "saved time" as a GP appointment was no longer required
Reduced Costs
Due to the reduction of duplicated work and potential to prevent delays in surgical procedures due to poor symptom control
3 days
Reduction in time taken for receipt of medication
Reduced GP Workload
Reduction in the number of instances GPs were asked to generate a prescription for the HF patient.
Increased job satisfaction
Encouragement of professional autonomy, clinical responsibility, and increased professional standing
"I felt very reassured with the nurse specialist and trusted her decision"
Reduced delay in accessing urgent medicines
Many patients were able to have their medication dispensed on the same day as their HF nurse assessment.
Timely Communication
Development of electronic communication to GP practices resulted in improved data quality, more timely communication and comprehensive audit trails
Excellent collaboration
of key stakeholders at each stage of the project

Task and Finish Group

A task and finish group was set up to oversee the implementation of the pilot project. Membership is detailed in table below:

Task and Finish Group Membership

Name	Title	Organisation
Gillian McCorkell	Nurse Consultant	PHA
Andrea Linton	NMOP Co-ordinator	HSCB[1]
James McAuley	NMOP Project Manager	HSCB[1]
Cathy McClure	Heart Failure Nurse Specialist	BHSCT
Donna McLaughlin/ Hilary Clarke	Heart Failure Nurse Specialist	NHSCT
Myrtle Donnell	Heart Failure Nurse Specialist	WHSCT
Matthew Galway (*until Feb 2021) **James Blackburn Smith (*from Feb 2021)**	Cardiology Pharmacist Cardiology Pharmacy Lead	BHSCT BHSCT
Brendan Moore **Linden Ashfield**	Clinical Pharmacy Development Lead Principal Pharmacist - Clinical Services Pharmacy	WHSCT NHSCT
Dr Paul Molloy	GP	GPC
Glenda Fleming	Deputy Director	MOIC
Karen Jenkins	Interim Divisional Nurse/Governance Manager Medicine and Emergency Medicine	NHSCT
Lana Dixon	Cardiologist	BHSCT
Katy Rennick	Cardiology Service Manager	BHSCT

[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

Introduction

This report summarises the evaluation of the New Models of Prescribing (NMOP): Heart Failure Nurse Specialist (HFNS) prescribing pilot project. It includes the outcomes from the project and recommendations based on the evaluation results and learning from the development of new processes.

The full report and evaluation data are available from MOIC Report and MOIC Appendices

Executive Summary

The number of healthcare practitioners in Northern Ireland (NI) who are eligible to prescribe continues to increase each year. In addition to the more traditional medical prescribers, appropriately qualified nurses and pharmacists have been able to prescribe independently since 1997. Additional professional groups such as podiatrists, optometrists and physiotherapists have more recently joined this list of authorised non-medical prescribers. Traditionally, prescribers have worked in either primary or secondary care, and mechanisms to facilitate prescribing are largely reflective of these two environments.

The Covid-19 pandemic has presented unprecedented challenges for the planning and delivery of HSC services, and a Strategic Framework for Rebuilding Health and Social Care Services has been developed which sets out the approach to restoring services as quickly as possible, taking into account examples of innovative approaches to service delivery, developed in response to the pandemic. Related initiatives such as the No More Silos – Urgent & Emergency Care Review, and the Primary Care Multi-disciplinary Teams Programmes further emphasise the increasing requirement for cross sector prescribing across the interface.

NI lacks a mechanism to allow many prescribers working at interfaces to prescribe medication directly to the patient. This report describes how processes to enable HFNS prescribing were implemented, tested and evaluated.

Nurse specialists and advanced nurse practitioners are having an increasing role in the management of patients suffering from diabetes, respiratory conditions and heart failure. As qualified non-medical prescribers they have an opportunity to maximise the benefits of their interactions with patients by optimising medication. However, due to

a lack of a facility to issue HS21s to patient in as they operate from Trust premises, they rely on GPs implementing their recommendations in most cases. Specialist nurses consult with patients by telephone, during a nurse-led clinic and at home visits. As emphasis on “shift-left” and treatment in the community continues GPs run the risk of being swamped with requests to prescribe and qualified non-medical prescribers risk under-utilisation of their qualifications.

Heart failure is often complex and associated with co-morbidities and significant symptom burden including, breathlessness, fluid retention, reduced physical capacity, and mental health issues. Sub-optimal management can lead to unscheduled hospital admissions. Heart failure nurses are ideally placed to ensure continuity of care, being often involved in the management of the patient from diagnosis to end-of-life. Access to specialist multi-disciplinary teams means that they should have a more direct role in the prescribing of medicines during acute or titrating phases of illness.

This New Models of Prescribing (NMOP) project facilitated issuing of HS21s by a qualified HFNS working in outpatients’ clinics.

Prescribing was permitted where there was:

- an urgent need for medication (within 72 hours of consultation),
- a requirement for titration/tapering of medicines with early review, or
- a need for specialised items outside the clinical expertise of a GP

The project was supported by collaborative working involving Health and Social Care Board (HSCB), Public Health Agency, HSC Trusts, and General Practitioners (GPs). All key stakeholders were represented on a Task and Finish Group and the project ran from January and October 2021 with two HSCTs and five prescribers participating.

Process maps were completed at baseline and at the end of the pilot. Baseline and end-point audits were completed to capture medicines prescribed, deprescribed and changed. Patient satisfaction was measured using questionnaires. Qualitative evaluation included recording of patient journeys, stakeholder satisfaction surveys and multi-disciplinary focus groups.

Positive outcomes from the project included:

- Excellent collaboration of key stakeholders at each stage of the project
- Displacement of prescribing activity from the GP thereby increasing their capacity for other clinical duties
- The importance of the HFNS skill set during a pandemic specifically in reducing the number of unnecessary care appointments
- Issuing of urgent prescriptions to manage unstable patients or those with fluid overload
- Prevention of hospital attendances, and rescheduling of surgical procedures due to poor symptom control
- Improved data quality, reduced paper-load, more timely communication and comprehensive audit trails
- Patient access to specialist care which led to faster medicines optimisation
- High level of patient satisfaction and confidence in the new pathway
- The development of an electronic treatment advice note to GPs which is suitable for implementation within other patient-facing services in participating Trusts
- Implementation of robust governance systems and standardisation of processes which resulted in improved time management and avoidance of process duplication
- Encouragement of professional autonomy, clinical responsibility, and increased professional standing leading to increased job satisfaction.

Challenges included:

- Time required to complete project paperwork
- Commencement of this pilot during the COVID-19 pandemic which impacted activity due to a decrease in face to face assessment and treatments necessitated by implementation of infection, prevention and control measures and redeployment of staff to support the acute response during surge periods
- Occasional issues with GP practices receiving/accessing treatment advice notes
- Variation in the understanding of monitoring responsibilities between GPs and HFNS

- Logistical difficulties with transportation to and storage of prescription stationery at offsite clinics
- Management of patients who had their medicines dispensed in a compliance aid.

Enablers identified to support the key principles of NMOP (established during the scoping phase of the project):

Overarching principle: ***New Models of Prescribing should provide a robust governance framework to deliver equitable care for all patients in Northern Ireland***	
1	Access to HS21s for HFNS should be streamlined into business as usual across all Trust
2	Benchmark outcomes of any proposed future model with redesigned services in other regions
3	Monitoring arrangements should be implemented to provide assurance that prescribing is within professional prescribing parameters
4	The learning should be applied at Trust level to inform Trust Governance frameworks/ policies
Principle 1 ***Regional models of prescribing are required***	
5	Share outcomes and learning of the evaluation with key stakeholders including budget holders and policy makers
6	Establish regular prescribing update training for nurse prescribers working at interfaces with primary care
7	Provide clarity to stakeholders regarding NMP prescribing budgets
8	Encourage interface nurse prescribers to review, rationalise and implement a narrower range of products in line with evidenced based recommendations
9	Commission a regional service to ensure adequate resource
Principle 2 ***Simplified and clear prescribing and supply pathways***	
10	Implement electronic treatment advice notes to simplify the process

11	Standardise communication processes to GPs from Trust HFNS
12	Keep documentation to a minimum

Principle 3 ***Contemporaneous recording and communication of prescriptions***	
13	A technical solution to enable printing of HS21s by HFNS prescribing at the interface between primary and secondary care is fundamental to NMOP realising its full potential. This will require significant investment and collaborative ownership with colleagues working in digital healthcare
14	Resource software and hardware needed to enable remote access to records
15	Raise awareness of interface nurse prescribing with community pharmacists and GPs

Principle 4 ***Patient's GP practice will be the host of the complete prescribing record***	
16	Involve key stakeholders to facilitate GP prescribing record as the complete prescribing record i.e. GPC representatives, eHealth Project Manager, Trust Clinical Information System leads
17	Develop, test and implement robust processes to communicate with GP practices via Electronic Document Transfer

Principle 5 ***Remote access to records***	
18	Ensure outpatient nurse prescribing is included within electronic prescribing programme
19	Share learning with ENCOMPASS programme
20	Enable remote access to decision support software for Trust nurse prescribers

Principle 6 ***Nurse prescriber's role should be clinical***	
20	Determine the appropriate skill mix and nurse prescribing resource needed to enable professional autonomy and to support further
21	Consider how access to HS21's could be utilised more fully by other specialist nurse prescribers working at interfaces with primary care e.g. diabetes nurse specialist
Principle 7 ***Medicines policy and legislation should enable new models of prescribing and supply***	
21	Consider impact of any Medicines Adherence policies on Trust nurse prescribing
22	Share outcomes and learning of the evaluation with budget holders and policy makers
23	Align further expansion with DH policy in relation to prescribing and supply of medicines at interfaces with primary care

Specific recommendations identified for the future are:

Stakeholder engagement

1. Stakeholder ownership at regional and local level is key
2. Share outcomes and learning of the evaluation with key stakeholders including budget holders and policy makers

Roll- out new model

3. Access to HS21s for certain nurse specialties should be streamlined into business as usual across all Trust. Expansion should initially be explored in the areas of respiratory illness and diabetes before further expansion to other long-term conditions and disease management that specialist nurses manage within HSCTs
4. Benchmark any proposed future model with redesigned services in other regions
5. Learning from the NMOP pilot should be used at Trust level to inform organisation governance frameworks and policies

6. Solutions to ensure adequate prescription security at offsite clinics should be agreed
7. Appropriate access to blood monitoring and test results should be made available to nurse prescribers
8. Clarification of what is meant by “urgent need” in relation to heart failure medicines is required

Communication

9. Encourage HSCTs to agree a regional eTAN rather than specific Trust eTANs
10. Consolidate current communication interfaces between Trusts and GP practices and ensure that existing NMOP interfaces are considered by the ENCOMPASS team

Workforce and resources

11. Firm commitments and clarity will be needed around NMP prescribing budgets
12. Determine the appropriate skill mix and nurse prescribing resource needed to enable professional autonomy and to support further expansion
13. The ability to prescribe via virtual consultations requires further exploration and will require electronic prescribing to be enabled
14. A technical solution to enable printing of HS21s by nurses prescribing at the interface between primary and secondary care is key to NMOP realising its full potential. This will require significant investment and collaborative ownership with colleagues working in digital healthcare

Training and guidance

15. Regular prescribing update training for nurse prescribers is fundamental to the success of any wider expansion
16. HFNS should be encouraged to review, rationalise and implement a narrower range of products in line with evidenced-based recommendations e.g. NI Formulary choices
17. Monitoring arrangements will need to be in place to provide assurance that prescribing is within professional prescribing parameters.

As a result of the evaluation both Trusts have agreed to incorporate the prescribing mechanism into their normal service delivery. Further expansion to other Trusts or additional service areas is dependent on commissioning arrangements being agreed regionally and the commissioning of a technical solution to enable printing of HS21s by NMPs working at interfaces.

Based on the NMOP pilot project recurrent funding has now been made available from the Department of Health to establish an Integrated Prescribing Programme within the SPPG. This will include the scaling up of NMOP based on the recommendations outlined.

The experience of this NMOP project can serve as an example of the capacity and commitment required to deliver NMOP in other areas. Learning will be taken forward in to new clinical areas and across the region.

Overview of New Models of Prescribing project

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 (HSCB) 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).

Overarching Principle:	1. Regional models of prescribing are required
New Models of Prescribing should provide a robust governance framework to deliver equitable care for all patients in Northern Ireland	2. Simplified and clear prescribing and supply pathways
	3. Contemporaneous recording and communication of prescriptions
	4. Patient's GP practice will be the host of the complete prescribing record
	5. Remote access to records
	6. Prescriber's role should be clinical
	7.Medicines policy and legislation should enable new models of prescribing and supply

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 nurse specialist prescribing at the interface
- Mental Health Home Treatment Team 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 Heart Failure Nurse prescribing at the interface. This report will describe the evaluation of that pilot.

Context

Specialist Nurses (SPN) have an increased role in the management of patients suffering from chronic diseases such as diabetes, respiratory conditions and heart failure. Many are qualified non-medical prescribers and, therefore, they have an opportunity to maximise the benefits of interactions with patients by optimising medication. The majority of SPNs are based within Secondary Care and operate from Trust premises. Therefore, they rely on GPs implementing their recommendations regarding changes in medications due to a lack of a facility to issue HS21s directly to patients. Consultations with patients by SPNs can be by telephone, during nurse-led clinics and at home visits. As an emphasis on "shift-left" and treatment in the community continues, GPs are at risk of significant burdens with requests to prescribe and qualified non-medical prescribers risk under-utilisation of their qualifications, skills and expertise. Furthermore, since the commencement of the COVID-19 pandemic, both primary care and secondary healthcare resources have been stretched with the need to rebuild and optimise the benefit from every member of the multi-disciplinary team.

Heart failure is often complex, associated with co-morbidities and significant symptom burden including, breathlessness, fluid retention, reduced physical capacity, and mental health issues. Sub-optimal management can lead to unscheduled hospital admissions. HFNS are ideally placed to ensure continuity of care and are often involved in the management of the patient from diagnosis to end-of-life. HFNS should have a more direct role in the prescribing of medicines during acute or titrating medication phases of illness, to ensure patient access to specialist multi-disciplinary teams.

Drug monitoring arrangements during the pilot

The HFNS pilot had the potential to be more complex than the other NMOP pilots as it included planned up-titration of medicines with associated monitoring, followed by a handover to a registered prescriber within the GP practice for ongoing prescribing and monitoring once the patient's medication was stabilised.

The importance of HFNS work is apparent from studies such as EUROASPIRE[2], which provides evidence of the need to ensure that patient therapy is optimised as well as commenced. Previous evidence shows that therapy is sometimes started but not

optimised. Optimisation requires dose titration and monitoring to a maximum tolerated threshold, which is complicated and research shows that this does not always occur[3]. Historically, titration of therapy was mostly carried out by the patient's GP and, as such the GP was clinically responsible for the prescribing and associated monitoring.

As part of the NMOP pilot, participating HFNS assumed the responsibility for prescribing and the up-titration of medication. As a consequence, it was necessary that all stakeholders understood the expectations of each other in the process and their own responsibilities at all points in the pathway, until care was returned to the GP for ongoing management at a defined point.

The relevant Trust's electronic Treatment Advice Note (eTAN) was used to communicate any prescribing undertaken by the HFNS to the GP, to avoid any ambiguity and to ensure integration into NI Electronic Care Record. For the duration of the pilot the HFNS compiled an eTAN for the entire titration course, describing their planned monitoring arrangements as well as the target dose and timescale / expected date for handover to GP for ongoing prescribing and monitoring.

In relation to monitoring, the HFNS pilot had to consider the following:

- The frailest patients had bloods taken at home by Trust Community Nurses, organised by Trust HFNS
- Trust phlebotomy Hubs were used where appropriate for Trust-raised phlebotomy requests. The pilot had to consider that there was variability in Hub provision across NI i.e. where distance precluded travel to a hub, participating HFNS were aware that the interface with GPs' treatment rooms could be utilised, but this was kept to a minimum
- Many (but not all) GPs participate in the funded NI Local Enhanced Service (LES) for Provision of Enhanced Phlebotomy Service, where GPs act as a phlebotomy service with Trust labels ensuring Trust requestor gets the results directly.

Aims and objectives of NMOP HFNS' pilot evaluation

The overarching aim was to complete an evaluation of the NMOP Heart Failure Nurse pilot through joint working between MOIC and HSCB[1].

The objectives were to evaluate:

Objective 1	The potential volume of prescribing activity that can be shifted to HFNS prescribers
Objective 2	The benefits in relation to access to prescribed items and reduced pressure on GPs
Objective 3	Perspectives on the delivery of tailored HFNS' interventions to patients and maximising professional skills at the point of care delivery
Objective 4	Perspectives on the care pathways that can be delivered by a HFNS
Objective 5	Perspectives on patients accessing prescribed items
Objective 6	Perspectives on the impact on health care appointments and hospitalisations
Objective 7	Perspectives on patient / client concordance with taking prescribed items
Objective 8	Perspectives on communication processes to GPs regarding items prescribed.

[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 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 session:** 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 mapped to the project objectives using a theming approach (a theme or discussion point was summarised and presented, supported by quote extracts form contributors). Average agreement ratings from the participants on how the pilot met the project objectives, were summarised.
- **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.
- **NMOP audit activity:** Clinicians were invited to submit prescribing activity from 1 week of their practice prior to the commencement of the project (mid-November 2020 onwards) and end of the pilot (October 2021). Audit activity was collated using Excel. Data was quality checked and re-categorised as necessary. Descriptive statistics were used to summarise activity at the start and end of the pilot and results were tabulated.
- **Process maps:** Clinicians participating in the NMOP pilot summarised their clinical workflow 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 collated in flowchart figure. Key findings were summarised.
- **Patient journeys**: Clinicians participating in the NMOP pilot summarised patient journeys which emerged during the pilot. The full summaries and key findings were presented in text.
- **Patient satisfaction survey:** Patients receiving care as part of the NMOP pilot were invited to complete and submit a paper Patient Satisfaction Survey in

person or via post. Descriptive statistics were used to summarise results. Direct quotes were extracted and presented.

- **Prescribing data**: Monthly prescribing data (number of prescribers, number of scripts, 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.

Results

Detailed results of the evaluation undertaken by MOIC and NMOP project team can be found on the evaluation report and appendices.

Discussion

The HFNS' prescribing pilot was innovative and flexible and ensured that the patient remained at the centre of the nurses' interventions. The multidisciplinary approach involving Trust Cardiology Nurse Leads, Senior nurses, IT colleagues, GPs, Community pharmacists, HSCB and BSO colleagues enabled the programme to be tailored to individual patient requirements.

The excellent collaboration also facilitated quality assurance at each stage of the project development as regular Task and Finish Group meetings ensured that identification of issues were incorporated within service design and delivery.

Results, both qualitative and quantitative, were very positive. A number of positive outcomes were described as benefits to the patient, health and social care system, and specific disciplines involved in the revised model of care. These are described as follows:

Benefits to patients:

A wide range of patient-perceived benefits were reported via the various data collection methods leading to an improved patient experience. Stakeholder feedback and process mapping highlighted that allowing HF nurses to prescribe on HS21s **reduced the delay in accessing urgent medicines,** which was of great significance in those patients requiring early intervention and rapid titration to optimise outcomes. As a result many patients were able to have their **medication dispensed on the same**

day as their HF nurse assessment. The process mapping exercise verified this indicating that the revised model reduced the number of steps by an average of 2.

Furthermore, the **time taken for the entire process** (initial nurse assessment to receipt of item via CP) **reduced by at least 3 days (43%).** The most significant change in process was the reduced need for HFNS to telephone the GP practice in order to commence a medication.

Documented patient journeys provided examples of the patient receiving **the right medicine from the right person at the right time.** This access to specialist care led to **improved symptom management** enabling previously delayed surgery to go ahead with reduced risk to the patient. NMOP improved prescription access for all patients leading to beneficial changes in disease markers.

Feedback from stakeholders and patients reported **increased patient satisfaction** and confidence in the new pathway. Previous evidence shows that therapy is sometimes started but not optimised. Optimisation requires dose titration and monitoring to a maximum tolerated threshold, which is complicated and research shows that this does not always occur. Up to now, titration of therapy was mostly carried out by the patient's GP and, as such the GP was clinically responsible for the prescribing and associated monitoring.

As part of the NMOP pilot participating HFNS assumed the responsibility for prescribing and the up-titration of medication and, as a consequence, it was necessary that all stakeholders understood the expectations of each other in the process and, their own responsibilities at all points in the pathway, until care was returned to the GP for ongoing management at a defined point.

Patient journeys and survey returns provided examples of **increased patient convenience** with the new model with 61% of respondents reporting "saved time". In some of these cases, time was saved as a GP appointment was no longer required (46%).

The patient survey provided an assurance that patients were provided with advice, as almost all patients reported that they received sufficient information on the item prescribed including likely duration of treatment, potential side-effects and process for obtaining a repeat prescription if needed. Almost 90% of respondents indicated that they

were provided with an opportunity to ask questions. Patients reported **high levels of satisfaction** with the service and over 80% stated that "everything was managed in one consultation".

In all but one of the therapeutic areas the prescribers achieved 100% compliance with NI Formulary choices indicating that prescribing was evidence-based.

Benefits to the healthcare system:

Stakeholders reported that the model owed its success, in part, due to clear, efficient and timely communication between prescribers and other stakeholders. **Robust governance systems and standardisation of processes** resulted in improved time management and avoidance of process duplication.

The development, rigorous testing and deployment of eTANs via Electronic Document Transfer to GP practices resulted in **improved data quality, reduced paper-load, more timely communication and comprehensive audit trails.**

NMOP also enabled more direct and timely communication between the HFNS and GP practice. Direct involvement of the HF nurse in writing the prescription will therefore have benefits in terms of **reduced costs** associated with duplicated work and contributed to improved multidisciplinary working.

The results from the evaluation of this NMOP highlight the importance of the HF nurse skill set during a pandemic specifically i.e. in the **prevention of hospital attendances, and rescheduling of surgical procedures due to poor symptom control.**

Stakeholder feedback reported that HS21 prescriptions written by HF nurses, on occasions had the potential to reduce healthcare appointments and hospitalisations. HFNS were able to streamline the necessary follow-up by accessing testing in local phlebotomy hubs.

A shorter process had the added benefit of potentially reduced costs associated with poor symptom control.

One of the recorded patient journeys concluded that the streamlined processes implemented with the NMOP facilitated the timely optimisation of therapy and improvement in symptoms experienced.

Benefits to Heart Failure Nurses:

Nurses participating in the stakeholder feedback session and responding to the survey recorded that NMOP **encourages professional autonomy**, clinical responsibility, and increased professional standing leading to increased job satisfaction. Furthermore, audit activity confirms that NMOP empowers clinicians to de-prescribe medications that patient may no longer require.

The NMOP was particularly beneficial **in utilising HFNS' knowledge** to up-titrate medicines quickly**.**

The evaluation found that there was a reduction in the number of instances that a HFNS needed to contact a GP to generate a prescription leading to **better time management** and cost savings.

Enabling patients to access medicines faster resulted in more **efficient management of HF nurse caseload.**

Participating nurse prescribers welcomed the increased opportunities that the project provided for learning and development and greater collaborations with GPs and GPPs. Those participating showed resilience in progressing with the project despite the pressures faced as a result of the COVID pandemic.

Benefits to GPs:

Evaluation of audit data found that there was a reduction in the number of occasions GPs were asked to generate a prescription for the HF patient. As well as **reducing GP workload** this should lead to subsequent cost savings.

Displaced prescribing activity and consultation activity from GPs to Heart Failure Nurses was also reported by stakeholders and results from the patient satisfaction survey indicated that just under half of those surveyed no longer required a GP appointment.

Stakeholder feedback suggested that as a result of NMOP **GPs were more aware of role of NMPs.** HF nurse prescribers **supported GPs during the COVID** pandemic by being able to issue urgent prescriptions to manage symptoms and to support rehabilitation of HF patients. However, the magnitude of this support to GPs was limited by the impact of COVID resulting in a higher percentage of remote consultations.

NMOP has enabled **improved communication** via the development of electronic transfer of treatment advice notes to GP practices.

Challenges

As well as positive outcomes the pilot provided an opportunity to identify the constraints of the new process and aspects that will require further consideration before any further expansion to the delivery of this new model.

HF nurse prescribers participating in the pilot reported that compilation of GP advice notes to advise that an HS21 had been issued could **be time consuming** and necessitated duplication of documentation. Furthermore, they were required to complete **additional project paperwork.**

There were specific challenges in implementing the NMOP that could not be measured, but that emerged through stakeholder feedback. Commencing this pilot during the **COVID pandemic** also caused difficulties as there were limitations to prescribing at virtual consultations. Implementation was also affected by staff sickness, shielding and redeployment due to COVID.

Some GPs surveyed, reported occasional **issues with receiving/accessing treatment advice notes.** It was evident that some were not aware of the transmission of treatment advice notes to GP document management systems via EDT. This was resolved via local communications to GPs from Trust GP Leads.

At the project initiation stage, inconsistencies in the understanding of laboratory tests and monitoring responsibilities were identified. While this was challenging, it provided **an early opportunity to clarify roles and responsibilities** before the project went live. Patient feedback included their preference for blood tests to be carried out at the outpatient appointment.

Offsite outpatient clinics in community settings led to some logistical difficulties with **transportation and storage of prescription stationery**.

The collection of audit data and prescription activity data at the end of the pilot period highlighted a wide variation in prescribing activity among the participating HFNS. Further exploration identified that this was due to differences in level of **prescribing confidence** and experience.

HSCT Challenges

One of the three Trusts engaged at the start of the project decided to withdraw due to a number of challenges including:

- **Redeployment of most HFNS** during the COVID pandemic
- HFNS felt that having access to an **onsite outpatient pharmacy** reduced the potential benefits of issuing a HS21
- The process of issuing an eTAN to the GP practice and following up with a telephone call to the GPP was well established
- Prescription security and transport in relation to offsite clinics

Challenges with compliance aids:

Due to the seriousness of the illness, presence of co-morbidities and the age of the patients diagnosed with heart failure a significant proportion will have their medicines dispensed in a compliance aid. **Compliance aids can be associated with risks,** and, as a result, the opportunities for the HFNS to issue HS21s to patients receiving some or all of their medicines in this manner was limited. HFNS were advised to:

1. Ascertain from patients if they have any medicines dispensed in a compliance aid
2. If a prescribing decision would result in a change to any medication that is currently dispensed in a compliance aid, rather than prescribing directly to the patient, the HFNS should make a recommendation to the GP for the medication to be amended. This communication should take place as soon as possible to ensure that further compliance aids issued to the patient contain the correct medication.
3. Communicate clearly to the patient, the patient's GP and community pharmacist any medicines that are prescribed "outside" of the compliance aid e.g. short complete courses of medicines such as a 28 day course of diuretics, or 3 day course of potassium supplements.

Future considerations and recommendations

The success of this and other NMOP pilots has led to new HSC posts being secured regionally with recurring funding to the Strategic Planning and Performance Group. The experience of this NMOP project can serve as an example of the capacity and commitment required to deliver a NMOP in other areas. Collective leadership, stakeholder engagement from the outset, capacity to facilitate and attend regular meetings, robust communication strategy and clearly-defined outcomes were all paramount to successful implementation.

Specific considerations / recommendations for the future are as follows:

1. Access to HS21s for certain nurse specialties should be streamlined into business as usual across all Trust. Expansion should be initially explored in the areas of respiratory illness and diabetes.
2. Share outcomes and learning of the evaluation with key stakeholders including budget holders and policy makers.
3. Stakeholder ownership at regional and local level is key.
4. Learning from the NMOP pilot can be used at Trust level to inform organisation governance frameworks and policies.
5. Determination of the appropriate skill mix and nursing resource needed to enable professional autonomy and to support further expansion.
6. Benchmark any proposed future model with redesigned services in other regions.
7. Regular prescribing update training for nurse prescribers is fundamental to the success of any wider expansion.
8. A technical solution to enable printing of HS21s by nurses prescribing at the interface between primary and secondary care is fundamental to NMOP realising its full potential. This will require significant investment and collaborative ownership with colleagues working in digital healthcare.
9. HF nurses should be encouraged to review, rationalise and implement a narrower range of products in line with evidenced-based recommendations e.g. NI Formulary choices.
10. Firm commitments and clarity will be needed around NMP prescribing budgets.
11. Monitoring arrangements will need to be in place to provide assurance that prescribing is within professional prescribing parameters.

12. Ability to prescribe via virtual consultations requires further exploration and will require electronic prescribing to be enabled.
13. Agree a regional eTAN rather than specific Trust eTANs
14. Consolidate current communication interfaces between Trusts and GP practices and ensure that existing NMOP interfaces are considered by ENCOMPASS team
15. Ensure adequate prescription security at offsite clinics
16. Ensure appropriate access to blood monitoring and test results for nurse prescribers working at the interface between secondary and primary care
17. Clarify “urgent need” definition in the context of heart failure.