



# **Medicines Optimisation Innovation Centre (MOIC)**

**Annual Report**

**2024 – 2025**



## **MEDICINES OPTIMISATION INNOVATION CENTRE (MOIC)**

### **Annual Report 2024 / 2025**

#### **Context**

The Regional Medicines Optimisation Innovation Centre (MOIC) aims to work towards better patient outcomes by initiating, developing and sharing best practice with regards to medicines use. This is achieved via the following primary activities:

1. Developing a systematic approach to finding and testing solutions for Health and Social Care (HSC).
2. Combining strengths in clinical pharmacy, pharmacy practice, research and service development, with technology and business acumen.
3. (a) Developing a medicines optimisation network, linking with the HSC and other life science networks and innovation centres in Northern Ireland (NI) and Europe.  
(b) Support knowledge sharing both with the HSC and wider networks and the development of collaborative working partnerships and joint working arrangements between participants.

#### **MOIC Work streams**

In addition, to work around infrastructure, communications and marketing, MOIC activity is split across four work streams, namely to:

- Focus on the needs of patients and the NI population.
- Accelerate the adoption of innovation into practice to improve clinical outcomes and efficiency.
- Build a culture of partnership and collaboration.
- Make a meaningful contribution to the NI economy.

This report will describe the key achievements in these areas during 2024/2025.



## **Staff, Infrastructure, Communications and Marketing**

A team of Programme Managers are key to the functioning of MOIC. During the year, a recruitment exercise was undertaken to replace a Programme Manager who had left the position during 2023/4. A new Programme Manager joined the team in August 2024.

MOIC benefited from the skills of a Communications Manager (0.6WTE) until the end of October 2023. This position remained vacant until November 2024. The new post holder has commenced work to review and upgrade both the MOIC website and the use of social media channels. In addition, regular newsletters are being produced.

Where possible, the MOIC team have attended conferences and workshops to assist with the promotion of MOIC. In addition, results from specific projects have been disseminated through a variety of means including: the publication of papers in academic journals; attendance and presentations at a range of conferences; publication on websites; and, via social media. A list of publications, reports and presentations is included in Annex A.

## **Focus on needs of patients and NI population**

Staff in MOIC have continued to work on a range of projects aimed at optimising medicines use and on maximising skill mix in order to ensure the best possible outcomes from medicines use.

In primary care, we continue to work with the Strategic Planning and Performance Group (SPPG) to evaluate new services that are being developed. Details of these evaluations are below:

- The SPPG ran a pilot for the Pharmacy First Service for the management of sore throats between November 2023 and 30<sup>th</sup> March 2024. Under this pilot, patients presenting with a sore throat underwent a consultation with the community pharmacist. Depending on the assessment and the application of the FeverPain criteria, a rapid antigen detection was used. This test indicates if the symptoms are caused by Group A beta-haemolytic Streptococcus which is the most common bacterial cause of sore throat. If indicated, the community pharmacist could supply antibiotics. During the year, MOIC completed the evaluation of this pilot. A final report which analysed 6768 consultations across 40 pharmacies was presented to SPPG in August 2024. Overall the feedback was very

positive, with the stakeholders involved reporting that the service should be considered for roll out to all community pharmacies, as it can help to ensure the appropriate use of antibiotics, while absorbing workload that would otherwise end up in other healthcare settings. Following this pilot, this service was available in most community pharmacies in Northern Ireland in winter 2024/25.

- Within Northern Ireland, transformation funding was awarded to the SPPG in order to scope and establish new models of prescribing by non-medical prescribers. MOIC led in the evaluation of projects in the areas of physiotherapy, heart failure, dietetics and mental health. During the reporting period, a paper on the dietetic component was published. A further paper considering the physiotherapy project has been accepted for publication in the Journal of Prescribing Practice and it is anticipated that this will be published in the near future.
- More recently, a Task and Finish group has been established to oversee a pathfinder project which will permit the prescribing and supply of palliative care medicines in Foyle Hospice using HS21 prescription forms. MOIC are members of the Task and Finish group and are leading on the evaluation of this pilot. Following an initial period of baseline data collection, HS21 prescribing in the community commenced in September 2025 by one medical prescriber and one non-medical prescriber (specialist palliative care nurse). Endpoint data has been collected and feedback interviews/focus groups were held in February 2024. Feedback was obtained from a wider stakeholder group using an online survey. The final reporting period will commence on conclusion of the pathfinder at the end of March 2025. Given the positive results from a period of midpoint data collection in late 2024, it is expected that this initiative will be scaled and spread regionally to other Hospices in Northern Ireland. The methodology and baseline results were shared via a poster presentation at the All Ireland Medicines Safety Conference, Dublin, in November 2024.
- SPPG have commissioned a service for the provision of emergency hormonal contraception through community pharmacy. Initially, MOIC was to evaluate user satisfaction with this initiative via online service user questionnaires. However, MOIC was subsequently asked to conduct a full evaluation of the service to include an analysis of a comprehensive sample of consultation forms for the service (10% sample of consultations across NI). Due to issues with data quality in the consultation forms, it was agreed with



SPPG and Community Pharmacy Northern Ireland that an in depth analysis of data will not be possible. Instead, MOIC will produce a report summarising data from the consultation forms and points for learning. The report will also include feedback from service users which has been collected on an ongoing basis from commencement of the service in October 2022. The report will be produced in the first quarter of the 2025/2026 financial year.

- In January 2025, the SPPG commenced a pilot of a community pharmacy first service for the treatment of shingles. MOIC have been working with the SPPG on the evaluation of this pilot.

MOIC were commissioned by the Department of Health (DH) to undertake a review of the pharmacy response to COVID-19. Three key areas were identified for inclusion in the review:

- Phase 1: Recommendations made in the Rapid Review of Pharmacy Services in response to COVID-19 (published by MOIC in September 2020)
- Phase 2: Pharmacy input into COVID-19 vaccination services
- Phase 3: Pharmacy input into rollout of novel COVID-19 therapeutics

Phase 1 of the review was completed during August 2023 and the final report was accepted by DH. A report relating to Phase 2 (vaccination services) was completed by MOIC and submitted to DH in March 2024. This was subsequently approved. During this reporting year, the final report for phase 3 was submitted and accepted by DH. All of the reports have been published on the DH website [Rapid review of pharmacy services changed in response to Covid-19 in Northern Ireland | Department of Health \(health-ni.gov.uk\)](https://www.health-ni.gov.uk/rapid-review-of-pharmacy-services-changed-in-response-to-covid-19-in-northern-ireland)

MOIC agree an annual business plan with DH. A key role for MOIC under this plan is to provide expertise and advice on a range of policy issues under development. During the year MOIC contributed to a number of areas related to workforce development within pharmacy including:

- **General Practice Pharmacy:** MOIC were members of the General Practice Strategy Group which was established to develop a strategic vision for the development of the pharmacy team within general practices in NI. The final report from this group “GPP NI 2030 – A strategy for General Practice in Northern Ireland” was launched in February 2024. During 2024/5 MOIC was invited to join the General Practice Pharmacist (GPP) Service Development Working Group which aims to oversee the development and implementation of GPP services in line with the strategic themes

outlined in the GPP Strategy. In addition, MOIC have been providing a strategic overview of the development and evaluation of the Western Health and Social Care Trust (WHSCT) pharmacy support to General Medical Services.

- **Advanced Practice Pharmacist Task and Finish Group:** During the year, MOIC continued to contribute to this group which is overseeing the strategic development of Advanced Practice Pharmacist roles across hospital, general practice, and community pharmacy sectors in NI. These roles will support and develop long-term clinical leadership within the profession.

A key component of pharmacy workforce development is ensuring that research skills are embedded and developed within the pharmacy workforce. MOIC have provided expert mentorship to number of pharmacists who are completing portfolios of evidence with a view to becoming Consultant Pharmacists in the future. In addition, MOIC have commenced planning of a regional journal club along with colleagues in the Northern Ireland Centre for Postgraduate Learning and Development (NICPLD). It is anticipated that the journal club will be piloted as part of the NICPLD autumn programme in 2025.

MOIC have been working with a number of colleagues across NI in the area of cardiovascular disease. Funding was obtained from AstraZeneca to pilot the establishment of a cardiometabolic pharmacy service within the WHSCT. A cardiometabolic pharmacist conducted outpatient reviews for those at risk of cardiometabolic diseases. These reviews aimed to increase adherence to medicines that prevent and delay disease progression. During 2023/4 work was undertaken to prepare a paper. This has been submitted for publication and feedback has been obtained from the reviewers. Work is ongoing to make the amendments required for publication.

At the start of the pandemic, MOIC worked closely with the Business Services Organisation Procurement and Logistics Service (BSO PaLS) and became the lead for technical assessment of offers of personal protective equipment (PPE) regionally. MOIC continue to lead on technical assessments of offers/items for contracting of PPE and some medical devices for the region. This work is in conjunction with both BSOPaLS and Infection Prevention Control. A business case for recurrent funding (led by BSOPaLS) was approved and a Senior Pharmacist for PPE Regulation and Innovation has been appointed. In addition to advising on PPE for planned purchases and use



within the HSC system, MOIC lead on the technical assessment of PPE items endorsed in national specifications which may require additional scrutiny to ensure compliance with EU regulations.

The COMET (COVID-19 MEDicaTion) study was an international study (now closed) which used routinely collected clinical data related to medicines and their effects on clinical outcome. MOIC and pharmacy staff at NHSC collected data which followed-up the COMET cohort. During the year, this data was published in a paper which explored the association between the Clinical Frailty Scale and mortality 24 months after hospitalisation in adult patients with COVID-19 (see Annex A for full details).

Pharmacy in schools is a comprehensive programme covering health literacy, self-care and medication safety. This programme has been designed in conjunction with Belfast Healthy Cities for delivery in primary schools and delivery recommenced in the autumn of 2023. Training for the participating schools took place during November 2023. MOIC have been assisting in the evaluation of this programme, however feedback from participating schools has been low. The programme is continuing in 2024/5 and the evaluation of the programme will cover both periods. There is an aspiration to expand Pharmacy in schools into post-primary education in 2025/6.

MOIC provided advice and support to a pharmacist involved in the provision of healthcare in HMP Maghaberry in respect of the development of a QI project focusing on medication review. This project aims to deliver patient-led medication reviews to 80 patients following methodology used in the iSIMPATY project. Advice was provided on the initial design and planning for the project, governance requirements, and suitability and use of models for data collection. MOIC will provide support when required as the project progresses

During the year, the DH completed a consultation on the *Valuing Medicines – a Strategy for the Sustainable Use of Medicines in Northern Ireland* (VMS). This strategy recognises that there are multiple factors leading to an increasing spend on medicines within Northern Ireland including expensive new medicines & technologies and the aging population. Never the less, steps must be taken to ensure that medicines use is sustainable. Under the VMS a range of themes are outlined in order to achieve this goal. Including to: *Drive improvement through data, technology, research and innovation*. In order to assist with this, the MOIC Board have approved funding to permit the appointment of a senior business analyst post based within the Analytics & Insight Team at the HSC



Data Institute (HSCDI). Initially the post-holder will be tasked with assessing the available data sources and how they can be used to build the required data infrastructure related to medicines use to deliver a prioritised work plan which will be developed by a newly established Digital Medicines Programme Board. MOIC staff have been working with colleagues at HSCDI to appoint a suitable individual to this position.

### **Accelerate the adoption of innovation into practice to improve clinical outcomes and efficiency**

Throughout the year MOIC have held a range of discussions with commercial companies regarding potential projects which aim to improve clinical outcomes and efficiency. A number of these are described below.

MOIC worked with the NHSCT respiratory team and a commercial company (PatientMpower) on a project to support the digital transformation of outpatient care pathways for patients with Interstitial Lung Disease (ILD). This project aims to implement remote monitoring technology in patients with ILD that will enable patient-led home assessments and the patient-recorded data to be shared with clinical teams in real time. A project proposal has been drafted and distributed to team members and information governance approvals have been obtained. Unfortunately, the project has been paused due to funding issues.

MOIC recently partnered on an Innovate UK Launchpad Health and Life Sciences application led by a local SME (Respiratory Analytics). The proposed project focuses on piloting a respiratory management platform in children and adolescents with uncontrolled asthma. The application was unsuccessful in the current round of funding. Feedback received is being considered and alternative funding opportunities are being sought.

In 2022/23 work was undertaken by the team at MOIC and a QUB spin out company (Continga Limited) to trial a novel system for improving medicines adherence in those with respiratory diseases. Using the system, clinicians can observe their patients as they use inhaled medication with a view to improving how such devices i.e. inhalers are used. The project found that the technology was a feasible method of assessing inhaler technique and monitoring adherence in a



small group of adult asthma patients managed in an outpatient setting. During the current year, a paper describing this project was published. (see annex A) .

### **Build a culture of partnership and collaboration**

MOIC continue to work with a range of collaborators from across the world. Activity includes:

- Collaborating in order to apply for large funding grants.
- Attending conferences and events in order to promote MOIC.
- Contributing to the organisation of conferences.
- Building international partnerships to aid knowledge translation and hosting.

The iSIPMATHY project was a collaboration between the Scottish Government, the Health Services Executive (HSE) in Ireland and MOIC. Using Interreg funding, the project trialled the use of pharmacy led medicine use reviews in all three jurisdictions. The iSIMPATHY project completed during 2023/24. During the current year a full paper was prepared and this has been submitted for publication. In addition, the findings from the iSIMPATHY project were used in the development of some new grant applications (details below).

MOIC was one of the 36 partners from across Europe involved in the SHAPES Innovation Action (Smart and Healthy Ageing). The project was funded by the EU under the smart and healthy living at home (Horizon 2020) workstream. This project was led by Professor MacLachlan, Director of the Assisted Living and Learning (ALL) Institute in Maynooth and was awarded a total of €21million (€572K was awarded to the NHSCT). In NI, MOIC was the lead for the Medicines Optimisation and Control pilot. The SHAPES project completed in December 2023, however during 2024/25 one paper and 2 book chapters relating to the project were published. In addition, a further paper has been submitted for publication. (see annex A)

The team at MOIC have worked with a range of partners on new grant applications. These include:

- MOIC collaborated on a grant application for the EU Innovative Health Initiative (IHI). The application, Persistence (SUPPORTING HEALTHCARE SYSTEM RESILIENCE IN THE TREATMENT OF CHRONIC DISEASES) aimed to improve treatment persistency among people living with

chronic diseases, through mapping and analysing existing methodologies and frameworks. Unfortunately, this application was not successful and alternative funding opportunities are being sought.

- MOIC worked with colleagues in QUB, Ireland and the US to develop a grant application to the US-Ireland Partnership Grant scheme. The application focuses on medicines optimisation interventions made at transitions of care. Intention to submit paperwork was sent to HSC R&D Division in Northern Ireland and Science Foundation Ireland for their consideration. Following their approval a full application was submitted to the National Institutes for Health (NIH) in the USA. Initial feedback has now been received from NIH and work has commenced on reviewing this feedback.
- MOIC was one of 15 partners who submitted an application to the HORIZON-HLTH-2024 DISEASE-13 Call. The application was building on the iSIMPATY project and proposed to implement and evaluate a 7-step pharmacist-led person-centred intervention in which medicines reviews are carried out to improve the management of polypharmacy in people with multiple long term conditions across low and middle income countries and disadvantaged populations in higher income countries. This application was unsuccessful.
- MOIC partnered in a HORIZON-WIDERA-2024-TALENTS-03-01 ERA application, led by University of Bucharest. The proposal (BIOHARMONY) focuses on establishing an inter-sectoral European network to enhance integrating One Health principles to tackle Antimicrobial Resistance (AMR) in the agri-food sector. Other partners include AFBI, UU and a University in Greece. This application was unsuccessful.

The WHO Global Patient Safety Challenge on medicines safety aims to reduce medicines related harm by 50% over a five year period. At a regional level MOIC sit on the Transforming Medicines Safety Advisory Group. Under this initiative a Health and Social Care Quality Improvement (HSCQI) medications safety collaborative was established to consider opioid prescribing. MOIC worked closely with HSCQI on the evaluation of this programme. There were 9 projects in total, with 3 in primary care. Focus groups with each of the teams were held in September 2024. A final draft of the evaluation report was produced in January 2025.

MOIC contributed to the organisation of the first All-Island Medicines Safety Conference. This event was held in Dublin in November 2024. Some 250 delegates attended the conference and in addition



to a range of oral presentations, over 100 posters were displayed. MOIC delivered an oral presentation on the iSIMPATY project and presented 2 posters.

Also linked to the WHO Global Patient Safety Challenge, MOIC is continuing to work with colleagues in the Institute for Healthcare Improvement (IHI) to consider a learning collaborative approach to medicines safety. Discussions are progressing with stakeholders in Poland and Estonia with regards to establishing a change project related to medicines optimisation. Funding options, including those with industry partners, continue to be explored. An application to present at the IHI International Forum in May 25 was submitted. This was accepted as a poster presentation, however the decision was taken to withdraw from this conference due to other commitments. In addition this work will be presented at the Healthcare Systems Ergonomics and Patient Safety (HEPS) Conference in Dublin (June 2025).

Medicines safety and medicines optimisation can be impacted by medication adherence. EU COST Actions (Co-operation in Science and Technology) are interdisciplinary research networks which bring researchers and innovators together to explore a topic of interest. MOIC were members of the ENABLE COST Action (European Network to Advance Best practices & technology) on medication adherence. This action included over 100 people from 39 countries and it aims to:

- raise awareness of adherence enhancing technological solutions;
- foster and extend multidisciplinary knowledge on medication adherence at patient, treatment and system levels;
- accelerate translation of this knowledge to useful clinical application; and,
- work collaboratively towards economically viable implementation of adherence enhancing technology across European healthcare systems.

This Enable Adherence COST Action closed in October 2024 and the final report was published. However participants will continue to network and consider further European funding opportunities

MOIC has now joined a new COST Action application made in collaboration with a number of colleagues from across Europe. The application focuses on Eco-directed medicines use (EcoMeds4U) and was led by the University of Highlands and Islands, Scotland. The Action will establish a collaborative, cross-sectoral network of interdisciplinary researchers and stakeholders including healthcare professionals, environmental experts, regulators, patients, and public representatives to work towards a harmonised framework advancing environmentally



informed “eco-directed” use of human medicines in Europe. It will focus specifically on pharmaceutical pollution in the water environment. In addition this network is continuing to meet to consider further opportunities for collaboration and funding.

MOIC are keen supporters of knowledge translation. In previous years knowledge translation has been supported via the hosting programme. In recent years hosting visits have not been possible due to clinical pressures, however, a range of international partnerships and collaborations continue to be developed including:

### **Poland**

- Work has continued under the MOU between MOIC and the Polish Society of Clinical Pharmacy in order to share learning and drive enhanced pharmacy services throughout Europe.
- The Ministry of Health in Poland has established a number of working groups to progress medicines optimisation in the country. MOIC is working with colleagues in Wroclaw to assist in delivering a medicines optimisation pilot in the hospital setting. A PhD project is continuing and it is anticipated the findings from this project will support the evidence base in the Polish context to help inform wider roll out.
- MOIC contributed to the development and planning of the European Society of Clinical Pharmacy (ESCP) Conference held in Krakow, Poland, in October 2024. MOIC delivered a plenary presentation and a workshop at the conference. The Polish Society of Clinical Pharmacy Annual Symposium dovetailed with this event.

### **Tanzania**

- A MoU with the Bugando Medical Centre was signed and launched in November 2022 with a view to aiding the introduction of medicines optimisation initiatives, including clinical pharmacy and Antimicrobial Stewardship (AMS) in Tanzania. This was on hold due to resource pressures for colleagues in Bugando, however discussions have recently recommenced. A new clinical pharmacy service has now been introduced in Bugando and MOIC is advising on the evaluation of this service.
- MOIC is linking with the Commonwealth Pharmacists’ Association to consider collaboration opportunities to share learning and support the introduction and evaluation of clinical pharmacy and antimicrobial stewardship activities in Commonwealth countries. A MoU was agreed and has now been launched. This work was on hold due to workload



pressures within CPA, however discussions have recently recommenced and funding opportunities are being explored to support this work going forward.

### **PhD students**

- Sonja Guntschnig from Austria first visited the NHSCT under the hosting programme in 2019. Based on her learning she is now developing AMS programmes within her hospital and region. Linked to this, she is undertaking a PhD under the supervision and mentorship of UU and MOIC. Throughout the year, Sonja continues to present initial findings at relevant conferences e.g. ESCP. A paper considering her initial work on clinical services evaluation was published in the European Journal of Hospital Pharmacy. Sonja is continuing to progress the scale and spread of her work in Austria.
- Anita Tula, is a PhD student based at the University of Tartu in Estonia. She is examining the area of medicines use reviews with a focus on older people and polypharmacy in community pharmacy settings.
- MOIC is working with two PhD students at the University of Oslo. The first is exploring the co-design of seamless person-centered interventions to optimise medication use across healthcare levels and is being undertaken by Malin O. Syversen. Mikas Glatkauskas is undertaking work to explore the innovation of a sustainable healthcare service for patients with multiple long-term conditions. A paper has been submitted for publication and an abstract will be submitted for the Healthcare Systems Ergonomics and Patient Safety (HEPS) Conference in Dublin, June 2025.

MOIC have continued to lead on the UK and Ireland Antimicrobial Stewardship Collaboration. This is an informal network of participants from UK and Ireland with an interest in Antimicrobial Resistance and Stewardship. The purpose is to complement existing groups and explore areas of mutual interest, funding, small to medium-sized projects and to share learning and work collaboratively to mutually benefit each jurisdiction.

In addition to the conferences described above, MOIC also helped to organise the 2<sup>nd</sup> All-Ireland Conference on Antimicrobial Stewardship 'which was held in Dublin during October 2024. The conference built upon the success of the first event which was held in October 2023. Planning has



already started for the 3<sup>rd</sup> annual event and this will be held in Belfast 9-10 October 2025 with MOIC leading on the event organisation.

### **Make a meaningful contribution to the NI economy**

MOIC are the HSC lead in the Health and Social Care Industry Partnership (HSCIP). The partnership aims to deliver 'triple win' benefits to patients, the service and the economy through more rapid and consistent patient access to innovation, more effective use of HSC resources and increased cross-sector research collaboration. During the year, work was undertaken with colleagues in the DH and at the Association of the British Pharmaceutical Industries to refresh this partnership and an announcement regarding this was made by the Chief Pharmaceutical Officer (CPO) at the NICON conference. Following this announcement, the CPO held a meeting with the Director of Hospital Services at SPPG and follow up actions to improve uptake of this partnership are being undertaken.

Under this partnership, work has been undertaken regionally in the area of heart failure. Applications from potential industry partners to the challenge were received by MOIC in April 2023 and a partnership agreement was reached with AstraZeneca. Following the establishment of governance paperwork and a project plan a 12 month project commenced in September 2023. A leadership group was formed and three Task and Finish groups progressed the following priority areas:

- 1- Early Identification and Referral Pathway
- 2- Triage and Patient Prioritisation Pathway
- 3- Optimal Treatment and Discharge Pathway

Outputs from these Task and Finish groups included modelling a future state pathway for heart failure services in NI, according to clinical guidelines and gold standards of heart failure care. Workshops were also held with clinical representatives from each HSC Trust to map the current heart failure pathways and identify variance/bottle-necks in the system. Upon conclusion of these work streams, recommendations were made to create a more streamlined and equitable future heart failure service in NI. The Northern Ireland Regional HF Transformation Project Report detailing these recommendations was drafted and will now be used to inform a business case for funding by SPPG. A regional stakeholder event was held in Belfast in December 2024 to share progress and detail next steps upon conclusion of this phase of work. An implementation phase is due to begin in Q2 2025.



MOIC continue to work, under a MoU, with the Cluster Saude de Galicia (CSG). Building on the Learning Expedition to Galicia, discussions have been taken forward with a range of CSG partners, including companies, universities and healthcare professionals on a range of areas such as AI and pharmacogenomics. Further to discussions on collaborative working and funding opportunities, the Director of Xenomica contributed to the successful Peace Plus iMPROVE pharmacogenomics application and will support the proposed project. MOIC participated in the #RIES24 event in Galicia in October 2024 and follow up meetings have been held with SMEs and the British Embassy in Madrid/Invest NI European representatives, re-establishing further collaborations. Links were also established with the Scottish Government regarding the Circular Economy.

Peace Plus is a new funding programme which will support peace and prosperity across NI and the border counties of Ireland. MOIC worked with colleagues in both regions, including those at policy level, to help inform the development of this programme. Medicines management was identified as a key area for funding under theme 4 (Healthy and Inclusive Communities) of Peace Plus. An application which includes the use of pharmacogenomics information in prescribing in primary care was submitted under theme 4.1. The project was entitled iMPROVE- Innovation in person-centred Medication Prescribing and Review for Optimal Value and Efficacy and has been successful. The project launched on March 1<sup>st</sup> and work is ongoing with the project partners to develop the work streams and data analysis plan.

MOIC continues to work with Invest NI and are an Invest NI Knowledge Partner. A new project with Medical AI Solutions (MAIS) titled 'Knowledge sharing and development of AI-powered medication reminders' has been approved and work on this began in December 2024. Two knowledge sharing workshops, a review of the product database and a functionality study has been completed since contracting and adoption was finalised.

### **Personal and Public Involvement (PPI)**

MOIC is endeavouring to ensure that PPI is embedded across the work programme. During the year a PPI representative continued to sit on the MOIC Board.



Major grant applications have PPI and user representatives embedded within work programmes, for example, as part of the US-Ireland Partnership Grant application, a PPI representative was appointed via the HSC R&D division Public Involvement Enhancing Research (PIER) network.

As described above, work was undertaken at a regional level under the HSCIP in the area of heart failure. This work included patient representation from the Heart Failure Warriors and the British Heart Foundation.

When organising conferences, we endeavour to include the patient perspective in these events, for example, two PPI representatives have been confirmed as keynote speakers at the 3<sup>rd</sup> All-Ireland Conference on Antimicrobial Stewardship 'All Ireland Collaboration: a multidisciplinary approach to antimicrobial stewardship' to be held in Belfast during October 2025. The 1<sup>st</sup> All Island Medicines Safety Conference held in November 2024 included patient representatives in the organising committee. In addition, patient stories and presentations were presented as part of the main proceedings.

### **Financial report 2024/2025**

The Medicines Optimisation and Innovation Centre has reported an overall surplus of £34k and has £970k of deferred income from commercial funding carried forward into 2024/25. The MOIC Board agreed to commit expenditure from this deferred income for a Senior Business Analyst post at £222k over a 3 year period. The post has not yet been appointed to, however when committed funding is considered this would reduce the deferred income balance at the end of 3 years to £748k (provided nothing else changes). An income and expenditure report is included in Annex B.

## **Annex A: MOIC publications, presentations and reports 2024.25**

### **Papers & publications**

Bourdena A, Mavromoustakis CX, Markakis EK, Mastorakis G, Pallis E (eds.). 2024. Intelligent Technologies for Healthcare Business Applications, Signals and Communication Technology, (Switzerland: Springer Nature, 2024) <https://doi.org/10.1007/978-3-031-58527-2>

Gergely O, Mazalová R, Štýbnar M, Hlavinka A, Goodfellow N, Scott M, Fleming G, Jochmannová L, Stanke L. 2024. Patients' UX impact on medication adherence in Czech pilot study for chronically ill. Behavioural Sciences; 14 (6): 489. <https://doi.org/10.3390/bs14060489>

Hogg A, Scott M, Fleming G, Scullin C, Huey R, Martin S, Goodfellow N, Harrison C. 2024. The Medicines Optimisation Innovation Centre: a dedicated centre driving innovation in medicines optimisation-impact and sustainability. International Journal of Clinical Pharmacy; Jul 23. doi: [10.1007/s11096-024-01775-1](https://doi.org/10.1007/s11096-024-01775-1). Epub ahead of print. PMID: 39042349

Kerexeta J, Beristain A, Graña M, Pascual E, Martin C, Goodfellow N, Carreira K, Manso M, Guerra B, Ladislav S, Tomáš V, Fabello E, Silva T, Scott M, Fleming G. Multicenter Prospective Blind External Validation of a Machine Learning Model for Predicting Heart Failure Decompensation: A 3-Hospital Validation Study.

In: Ferrández Vicente, J.M., Val Calvo, M., Adeli, H. (eds) Bioinspired Systems for Translational Applications: From Robotics to Social Engineering. IWINAC 2024. Lecture Notes in Computer Science, vol 14675. Springer, Cham. [https://doi.org/10.1007/978-3-031-61137-7\\_34](https://doi.org/10.1007/978-3-031-61137-7_34)

Minnema J, Lafeber M, Sablerolles R, van Kempen J, Tap L, Polinder-Bos H A, van de Loo B, van der Kuy H, Faes M C, COMET and COOP research groups. 2024. Association between Clinical Frailty Scale and mortality 24 months after hospitalisation in adult patients with COVID-19. Heliyon. <https://www.sciencedirect.com/science/article/pii/S2405844024164870> Available online 15 November 2024, e40456

O'Neill K, Gormley C, Kelly MG, Huey H, Fleming G, Scott M, Shields M, McElnay JC. 2024. Service development project to pilot a digital technology innovation for video direct observation of



therapy in adult patients with asthma. *BMJ Open Quality*;13:e002626. doi:10.1136/ bmjoq-2023-002626

## **Reports**

The Shapes of Care to Come. Suggestions for the advancement of integrated care and support services in Europe and the role of person-centred digital technologies. A European Think Tank report supported by the SHAPES project. April 2024 [The-Shapes-of-Care-to-Come- final-4.pdf](#) [last accessed 29.04.2024]

Goodfellow N, Fleming G, Scott M. Pharmacy response to Covid-19. Review 3: The role of pharmacy in the rollout of Covid-19 therapeutics. June 2024. [doh-pharm-role-covid-vaccs-moic-report-150324.pdf \(health-ni.gov.uk\)](#) [last accessed 29.04.2025]

An Evaluation of a Pharmacy First Sore Throat Pilot Service Pharmacy First for Sore Throat service for patients aged 5 years and over. June 2024 [MOIC Pharmacy-First SoreThroat FinalReport Aug24.pdf](#) [last accessed 29.04.2025]

Goodfellow N, Fleming G, Scott M. Service evaluation: Opioid improvement collaborative programme. January 2025

## **EVENTS organised or jointly organised by MOIC**

**All-Ireland Antimicrobial Stewardship Conference ‘*Collaborating across borders: a multidisciplinary approach to antimicrobial stewardship*’, 9-10 October 2024, Aisling Hotel, Dublin.**

MOIC partnered and jointly organised this event in collaboration with colleagues from Ireland and the CARA Network. This 2<sup>nd</sup> All-Ireland conference focusing on antimicrobial stewardship aimed to support, develop and implement a collaborative approach to infection management and antimicrobial resistance (AMR). The event brought together cross-sector, multidisciplinary participants from across the Island of Ireland and featured presentations from national and international experts. Participants shared their research, proposed interventions and stewardship programmes and presented new methodologies in the area of antibiotic prescribing and infections.



**Northern Ireland Heart Failure Transformation Project, 2 December 2024, Malmaison Hotel, Belfast:**

A celebration event for the Northern Ireland Heart Failure Transformation Project was held in December. MOIC assisted with the preparation for this event jointly organised by SPPG and a commercial partner as part of the HSCIP. The aim of the event was to share progress of the project and discuss next steps with key stakeholders. Professor Scott delivered an address to attendees, as MOIC is the HSCIP lead on behalf of HSCNI.

**First All-Island Medicines Safety Conference, 28-29 November 2024, Dublin Castle, Dublin:**

MOIC were part of the organising committee for the first All-Island Medicines Safety Conference. Some 250 delegates attended the conference and in addition to a range of oral presentations, over 100 posters were displayed. MOIC delivered an oral presentation on the iSIMPATY project and presented 2 posters.



**Presentations and posters**

<b>Authors/Presenter</b>	<b>Title</b>	<b>Poster or Oral</b>	<b>Conference/Meeting</b>
Goodfellow N	<i>SHAPES of things to come- medicine control and optimisation</i>	Presentation	ICIC24, Belfast, 23 April 2024
Fleming G	<i>Health and Social Care Industry Partnership (HSCIP)</i>	Presentation	ICIC24, Belfast, 23 April 2024
Huey R & Goudy C	<i>Transparent Face Masks- A Quality Improvement Initiative to Improve Communication</i>	Poster	Institute for Healthcare Improvement (IHI) International Forum, London, 10-12 April 2024.
Brown J & Scullin C	<i>iSIMPATY</i>	Presentation	PrescQIPP Polypharmacy & Deprescribing VPG, 1 May 2024
Fleming G	<i>The Medicines Optimisation Innovation Centre</i>	Presentation	Presentation to the Queen's University of Belfast Pharmacy School Board, 30 May 2024
Scott M	<i>What would the clinical pharmacist do – the journey in Northern Ireland</i>	Presentation	BIP Pavia TCD student learning meeting 4 June 2024
Fleming G	<i>Medicines optimisation Innovation Centre</i>	Presentation	Presentation to HSC Data Institute staff, 1 August 2024



Hogg A	<i>The Medicines Optimisation Innovation Centre</i>	Presentation	All Ireland Antimicrobial Stewardship Conference, Dublin, 9-10 October 2024
R Huey	<i>MOIC - who we are and what we do</i>	Presentation	NHS CEP Pit Stop, Belfast, 18 October 2024
Scott M & Hogg A	<i>Evidencing novel clinical pharmacy practices across a health system</i>	Presentation	European Society of Clinical Pharmacy, Krakow, 21-23 October 2024
Hogg A & Brown J	<i>The patient voice – from theory to transforming practice</i>	Workshop	European Society of Clinical Pharmacy, Krakow, 21-23 October 2024
Hogg A, Scott M, Fleming G, Scullin C, Huey R, Martin S, Goodfellow N, Brown J & Harrison C	<i>A regional centre dedicated to driving innovation in medicines optimisation - impact and sustainability</i>	Poster	All-Island Medication Safety Conference, Dublin, 29 November 2024
Brown J, Scullin C, Fleming G, Scott M & Hogg A	<i>Stakeholder views of the 7-steps to appropriate pharmacy tool in a hospital setting</i>	Poster	All-Island Medication Safety Conference, Dublin, 29 November 2024
McCorkell G, Linton A & Huey R.	<i>Hospice Pathfinder to Improve Access to Medicines</i>	Poster	All-Island Medication Safety Conference, Dublin, 29 November 2024
Fleming G	<i>The Medicines Optimisation Innovation Centre</i>	Presentation	Presentation to ABPI members meeting, Antrim, 24 Feb 2025
Fleming G	<i>Health and Social Care Industry Partnership (HSCIP)</i>	Presentation	Presentation to SPPG and PHA colleagues, 25 February 2025



<b>Medicines Optimisation and Innovation Centre Income &amp; Expenditure as at 31st March 2025</b>			
	<b>Project</b>	<b>YTD As at 31st March 2025</b>	<b>Deferred Income</b>
<b>Deferred Income as at 31st March 2024</b>			
			- 857,899
<b>2024/25</b>			
<b>SPPG</b>		- 750,059	
<b>PHA</b>	Research & Development Programme Manager	-	
<b>External Funding</b>			
	SocialScript PharmECIST		
	Isimpathy		
	ISKUS		7,647
	QUB		
	NHS Scotland i-sympathy		- 117,658
	PROCEDURE KITS COMMISSION - ISKUS Health Ltd		- 2,264
	Transfer from Balance Sheet Isimpathy / Shapes	-	-
<b>Total Income as at 31st March 2025</b>		<b>- 750,059</b>	<b>- 970,174</b>
<b>Expenditure as at 31st March 2025</b>			
<b>MOIC Costs</b>			
	Staffing Costs	601,260	
	Non pay Costs	114,686	
	R&D Staffing	-	
<b>Total Expenditure as at 31st March 2025</b>		<b>715,946</b>	<b>-</b>
<b>Surplus</b>		<b>- 34,113</b>	<b>- 970,174</b>
<b>Deferred Income as at 31st March 2025</b>		<b>- 970,174</b>	
<b>Forecast as at 31st March 2025</b>		<b>- 34,113</b>	
*Note we have committed £222k over a 3 year period from the £970k deferred income balance shown above, leaving a residual amount of £748k. Post not filled as at 31/03/2025 with expected date for post to be filled being August/September 2025			

