Interim analysis of the iSIMPATHY project in the Republic of Ireland

iSIMPATHY
making medication personal

April 2022

iSIMPATHY is supported by the European Union's INTERREG VA Programme and managed by the Special EU Programmes Body (SEUPB)

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Executive Summary

The iSIMPATHY project is delivering quality clinical care in the primary care setting in border counties, through an interdisciplinary collaborative approach centred around pharmacist-led medicines reviews. This is the first time comprehensive person-centred medicines reviews have been delivered outside of a research setting in general practice in Ireland. The approach is highly effective at addressing the risks associated with complex polypharmacy, is highly acceptable to GPs and patients and provides a significant return on investment. It is aligned with the HSE's Patient Safety Strategy, National Service Plan and Sláintecare objectives of right care, in the right place at the right time through enhanced community care.

iSIMPATHY is an EU-funded project led by the Scottish Government, with the HSE and Northern Health and Social Care Trust as partners. It aims to improve patient adherence and understanding of their medicines, reduce inappropriate polypharmacy, optimise medicines use and reduce medication-related harm. Project staff report into HSE CHOs 1 and 8 and are supported by the CHOs, National Quality and Patient Safety and EU North South Unit.

The iSIMPATHY project is delivering comprehensive medicines reviews through introduction of a dedicated skilled clinical pharmacist resource to primary care services in GP practices. Following bespoke training, the senior clinical pharmacists carry out a comprehensive medication review with patients, focussing on their needs and wants and clinical and safety considerations, using a methodology developed in Scotland. The pharmacists then liaise with GPs to action changes as appropriate. Reviews incorporate consideration of the patient's perspective and shared decision making, medication and clinical history, laboratory and diagnostic results, the pharmacist's and GP's perspective. This approach is delivering a large volume of reviews, reducing polypharmacy and improving the appropriateness of medicines. The reviews address multiple issues per review, substantially improving patient safety, quality and appropriateness of prescribing, patient understanding and experience and GP job satisfaction and knowledge.

- Four senior clinical pharmacists (3.5 wte) are working with 10 GP practices.
- 1223 reviews have been delivered in the first year of the project, to 8th February 2022.
- Patient, carer and family acceptability is high, with very high uptake of reviews and agreement with changes and extremely positive feedback received.
- 88% of patients reported improvements in at least one domain of Patient Reported Outcome Measures in an analysis of 100 consecutively completed reviews. Most patients reported improvements in understanding and experience of adverse effects.

- Project GPs and pharmacists report iSIMPATHY is having positive effects on patient safety, quality of life, satisfaction, understanding, adherence and quality of care, and a positive effect on GP job satisfaction, knowledge and understanding in a HSE survey.
- GPs believe pharmacist knowledge and skills, capacity (time) to carry out reviews and pharmacist communication with the patient are key facilitators to the success of the project.
- GPs' capacity to engage with the project is a challenge raised by both GPs and pharmacists.
- There is unanimous support among project GPs and pharmacists for the clinical pharmacist role to continue in project practices and spread to further practices.

Analysis of 524 completed reviews shows:

- Reviews are provided to patients with high complexity and susceptibilty to medication-related harm, with mean age 77 (range 31-101) and mean of 7 comorbidities recorded.
- Patients were taking a mean of 14 medicines pre-review. Changes (stopping, decreasing, starting and increasing) resulted in a mean of 12 medicines post-review.
- A mean of 13 issues are addressed per patient, including drug changes, education, monitoring, referrals, medication reconciliation and updating practice records. 80% were classified as significant or very significant and improving patient care. 33% of patients reviewed had an issue addressed which was classified as very significant, preventing a major organ failure or adverse reaction of similar importance.
- At least one polypharmacy indicator (indicating that a serious adverse outcome is possible) was identified for approximately 75% of reviews. 69% were fully resolved, with progress towards resolution in many of the remainder (e.g. decreasing dose with a view to stopping in an appropriate timescale; stopping one sedating/anticholinergic medicine). The most common indicators addressed include high falls, bleeding and acute kidney injury risks.
- Each review results in direct savings due to drug dispensing costs avoided and indirect savings associated with avoided hospitalisations due to adverse drug reactions. The project has delivered cost savings of €569,918 to the HSE to February 2022.
- The model delivers €466 savings per review and each review costs €205 (pharmacist pay, non-pay costs and GP payment), resulting in a net saving of €261 per review.
- Additional benefits of the project include the iSIMPATHY project pharmacists' ability to:
    - implement national guidance, including Medicines Management Programme, PCERS, antimicrobial stewardship, medication safety and clinical guidance,
    - enhance effectiveness of other services, e.g. Enhanced Community Care and
    - improve medication safety at transitions of care.
- The project also makes information and clinical guidance available to healthcare professionals and patients (via a website and app and through presentations and articles) and training will be available to all healthcare professionals later in 2022.

Introduction

Reducing medication-related harm is a priority areas identified in the Patient Safety Strategy 2019-2024 (HSE, 2019) and in the National Service Plan 2021 (HSE, 2021). Delivering the right care, in the right place at the right time is core to the Sláintecare report (Houses of the Oireachtas, 2017), implementation strategy and action plan, with enhanced community care being pivotal to achieving these goals.

Polypharmacy (taking multiple medicines) and issues with adherence (being able and willing to take medicines) contribute substantially to an individual's risk of medication-related harm. Addressing the challenges posed by polypharmacy and adherence on a population level is recommended by the World Health Organization as one of the key areas to focus on to achieve reductions in medication related harm (World Health Organization, 2017).

The HSE is a partner in the EU-funded iSIMPATHY project. Together with the lead partner, the Scottish Government, and the Medicines Optimisation and Innovation Centre (MOIC) in Northern Ireland, the project recruits and trains senior clinical pharmacists to deliver holistic person-centred medicines reviews, in collaboration with doctors and other health care professionals.

This report presents our experience to date of implementing the iSIMPATHY project in Ireland.

Polypharmacy and adherence

Polypharmacy, or the use of multiple medicines, is associated with an increase in a person's risk of medication-related adverse drug events, healthcare utilisation and an increased likelihood of some of their medicines being inappropriate (potentially inappropriate medicines). Polypharmacy increases the drug burden on the individual and their family or carers and increases the likelihood that the person will not adhere to the medicines as intended, both intentionally or not.

In 2012, 60% of people aged 65 or over were prescribed at least 5 regular medicines and 22% were taking at least 10. 30% of people aged 45-64 were prescribed at least 5 medicines and 8.3% prescribed 10 or more. The rates of polypharmacy were increasing rapidly to 2012. (Moriarty, 2015)

Of those aged 65 or older, 51% of community dwelling adults (Perez, 2018) and 70% of those in long-term care (O'Sullivan, 2013) had at least one potentially inappropriate prescribing indicator.

Potentially inappropriate prescribing is associated with an increased likelihood of hospital admission and a considerable financial burden to the state, estimated to be €46 million for community dwelling adults aged 70 or older (Cahir, 2010).

10% of emergency admissions in people aged 65 or older result from an adverse drug event, with 71% definitely or possibly avoidable (Curran, 2020).

Polypharmacy is appropriate if each medicine is prescribed to achieve specific therapeutic objectives agreed with the patient, those objectives are being achieved or are likely to be, medicines are optimised to minimise the risk of adverse drug reactions and the patient is motivated and able to take all medicines as intended (Scottish Government, 2018).

iSIMPATHY

iSIMPATHY (Implementing Stimulating Innovation in the Management of Polypharmacy and Adherence Through the Years) is a project funded by the European Union INTERREG VA with match funding from the Department of Health. The Scottish Government is lead partner and the HSE and Medicines Optimisation and Innovation Centre in Northern Ireland are project partners. The project is supported in Ireland by the HSE Work Package Lead, Project Management Lead, HSE iSIMPATHY Steering Group and by structures to manage the project and share learning across the three partner jurisdictions. The project staff report into CHO 1 and 8 and the CHOs, the National Medication Safety Programme (in the HSE National Quality & Patient Safety Directorate) and HSE EU North South Unit support the project.

The project aims to improve the health and wellbeing of people at higher risk of medication-related harm living in the community or in residential care settings. Senior clinical pharmacists working in GP practices carry out comprehensive person-centred medicines reviews with the patient (face-to-face or phone). The pharmacists liaise with patients and doctors to agree and implement changes. The holistic review focusses on the person's needs and wants as well as clinical and safety considerations, following Scottish Polypharmacy Guidance.

Reviews are offered to those in participating GP practices in Donegal, Sligo, Cavan, Monaghan, Louth and Leitrim, GP practices in Western Scotland and in the Antrim Area Hospital in Northern Ireland, who are:

- Prescribed 10 or more regular medicines,
- On medication or combinations considered particularly high-risk for adverse events such as bleeding or acute kidney injury (polypharmacy indicators),
- Adults of any age, approaching the end of their life due to any cause, or
- Aged 50 years and older and resident in a residential care setting e.g. nursing home, intellectual disability residential setting or community hospital.

Reviews aim to improve patient adherence and understanding of their medicines, reduce inappropriate polypharmacy and optimise medicines use. More information is available on **www.isimpathy.eu**

Our partners, in particular the Scottish Government, bring a wealth of experience in developing and delivering improvements in polypharmacy and adherence. The project follows the Scottish Polypharmacy approach (**www.managemeds.scot.nhs.uk**) and benefits from use of tools including the guidance and an app. The project implements recommendations from a large EU-funded project, SIMPATHY (SIMPATHY consortium, 2017), and is evaluating this approach.

Governance and structures

The project operates under strict governance and reporting requirements imposed by SEUPB, who administer the funding. These include:

- Project board, including clinical, quality and operational representation from Ireland.
- Management steering group, including HSE work package and project management leads.
- The HSE iSIMPATHY steering group, which includes representation from HSE CHO 1 and CHO 8, the HSE EU North South Unit, the project management lead, work package lead and patient advocates. The group is chaired by the primary care leads in CHO 8 and CHO 1.

The project has finalised multiple frameworks and agreements to support its work, including:

- Governance framework and terms of reference for each group
- Risk management strategy
- Recruitment strategy
- Monitoring and evaluation strategy
- Communication and crisis communication strategies
- Data protection impact assessment and data processing agreement

Recruitment and GP engagement

The project pharmacists have been in post since November 2020 (1 pharmacist), January 2021 (2 pharmacists) and February 2021 (1 pharmacist working as 0.5 wte) respectively. The project management lead is in post since April 2021.

An invitation to express interest was circulated to GP practices in INTERREG region locations where the pharmacist could work in two or more practices with a population of 20,000 patients in total. 12 expressions of interest were received and the project is being delivered in 9 practices:

- Bayview Family Practice, Bundoran and Ballyshannon, Co Donegal
- Medicentre Barrack St, Sligo, Co. Sligo
- Strandhill Surgery, Shore Road, Strandhill, Co. Sligo
- Kingscourt Surgery, Co Cavan
- Ballyjamesduff Family Practice, Ballyjamesduff, Co. Cavan
- The Group Practice, Cloughvalley, Carrickmacross, Co. Monaghan
- The Square Medical Centre, Dundalk, Co. Louth
- Northgate Surgery, Drogheda, Co. Louth

An additional opportunity to express interest was opened to GPs in Leitrim in December 2021, with The Health Centre, Dromahair, Co. Leitrim joining the project in January 2022.

Engagement and information

Minister Stephen Donnelly, Dr Colm Henry and Mr Joe Ryan addressed the project launch in November 2020 along with their counterparts from Scotland and Northern Ireland. They welcomed the project's potential to deliver significant health, safety and economic benefits, to build interprofessional collaboration between GPs and pharmacists and to share learning with Scotland and Northern Ireland to support people living healthier, longer and active lives in their communities, in line with our Sláintecare strategy (Houses of the Oireachtas, 2017).

Multiple presentations, webinars and meetings have shared information both about the project and learning about polypharmacy and medicines reviews. These include presentations at the Irish Medication Safety Network conference, Irish Institute of Pharmacy webinar, the HSE Medicines Management Masterclasses and poster presentations at the All Ireland Conference for Integrated Care in addition to iSIMPATHY shared learning events.

Training

Seven pharmacists have completed project training (the project pharmacists, work package lead and the pharmacists' line managers). The pharmacists completed a substantial training package and are participating in ongoing shared learning across the project jurisdictions. Quality assurance is built into the project through standardised training across jurisdictions, independent quality assurance of 10 of each pharmacist's reviews and ongoing peer quality assurance of 5% of reviews.

A training package is due to launch in Q2 2022 and healthcare professionals throughout Ireland will be encouraged to complete the training. Monthly peer learning events are available to interested healthcare professionals.

Medicines reviews process

Patients likely to benefit from a review were identified from referrals from GPs, community and hospital pharmacists, practice and hospital nurses and through the pharmacist identifying suitable patients from GP practice records. Reviews were offered to people resident at home and to nursing home residents.

The pharmacist phones the patient, provides information about the review and arranges a follow up call or face to face appointment. The pharmacist and patient (and family or carers if desired) then meet (face to face or via telephone) to carry out a comprehensive, person-centred medicines review. The reviews begin with what matters to the patient, discuss medicines which are essential, unnecessary, (in)effective, harmful or have the potential to harm and whether there are more cost-effective alternatives. The pharmacist and patient agree an approach to adjusting medicines using shared decision making.

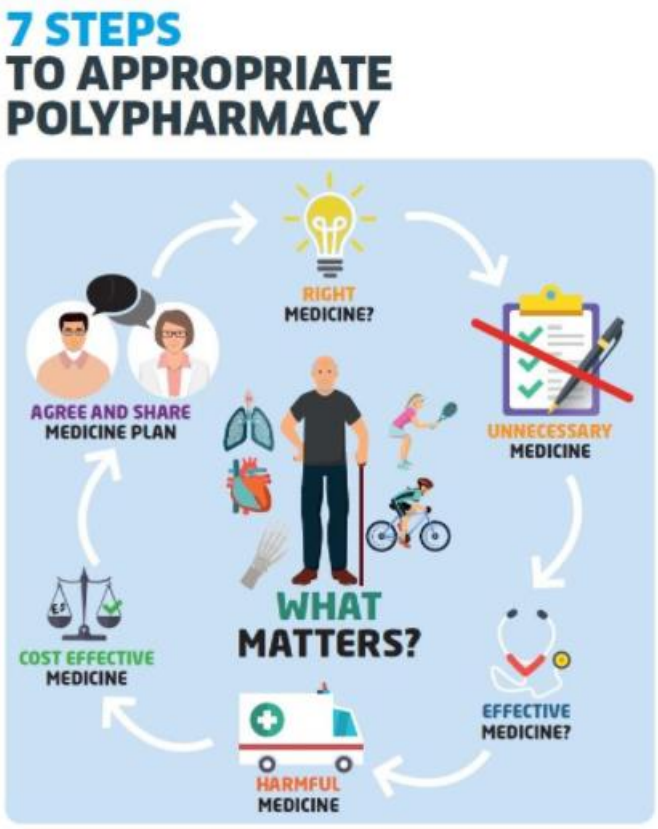

Figure 1: The 7 Steps medicines review process (Scottish Government, 2018)

The pharmacist provides the patient's GP with a summary of the review and recommendations. The GP then considers these recommendations and actions them as appropriate. The pharmacist follows up with the patient to discuss their experience with the changes.

Outcomes

Analysis

The project incorporates a substantial evaluation component, including:

- Patient reported outcome measures: pre- and post-review questionnaires.
- Evaluation of the changes made against polypharmacy indicators, the Eadon classification and the person-centred Medication Appropriateness Index (PC-MAI).
- Economic evaluation, based on the SIMPATHY model.

This report presents analysis of the first 524 completed reviews, or as otherwise indicated. Further analysis will be shared when available.

Reviews

1223 reviews have been delivered in the first year of the project, to 8th February 2022. Pharmacists are delivering an average of 10 reviews per working week.

Analysis of 524 completed reviews shows:

- Mean age 77 (range 31-101)
- Mean documented comorbidities 7

Quality outcomes

Polypharmacy changes

Patients were taking a mean of 14 medicines pre-review. Changes (stopping, decreasing, starting and increasing) resulted in a mean of 12 medicines post-review, or a net reduction of 2.05 drugs per patient reviewed.

Each review may result in multiple changes. For example, one review resulting in a decrease of one drug overall, involved multiple changes including tapering and discontinuing a benzodiazepine sedative, an antiplatelet, codeine and an antihypertensive (reducing risk of adverse effects), starting iron, an antidepressant and an inhaler for COPD (improving symptom management and avoiding adverse events) and decreasing the doses of three medicines.

Issues addressed

A mean of 13.1 issues were addressed per patient reviewed. These consist of changes to optimise medicines (drug stop or dose decrease, drug start or dose increase), patient education, referral to other services or healthcare professionals, monitoring (e.g. labs), liaising and collaborating with the multidisciplinary team. Medication reconciliation resulted in a clarified complete and current medication list and updated practice records. This was particularly time-consuming but the benefits include removing the potential for out of date information autopopulating referral letters at transitions of care.

Category	Count (in 524 reviews)
Reviewed/carried out labs/monitoring	1370
Drug stopped	1174
Information given to healthcare professional	669
General patient education	524
Medication reconciliation	524
Specific patient education	397
Information given to patient	397
Drug dose decreased	387
Recommendation accepted; no change at present	375
Drug started	286
Referral to a healthcare professional or service	267
Unresolved	141
Drug dose increased	113
Recommendation not accepted	94
Information into record	92
Reviewed patient's medication	65
Total	**6875**

Table 1: Issues addressed in iSIMPATHY medicines reviews (n = 524)

Significance of issues addressed

Issues addressed are categorised according to the potential significance to patient care (Eadon, 1992), with a focus on standardising this classification across the project sites. Eighty percent of issues were deemed to improve patient care. 175 issues classified as Eadon grade 5 (very significant and prevents a major organ failure or adverse reaction of similar importance) were identified and resolved (in 33% of reviews).

Eadon classification	Number	%
1. Detrimental to patient	0	0
2. No significance to patient	90	1.3
3. Significant: does not improve patient care	1264	18.9
4. Significant: improves patient care	5150	77.1
5. Very significant: prevents a major organ failure or adverse reaction of similar importance	175	2.6
6. Potentially lifesaving	0	0

Table 2: Potential significance of issues addressed in iSIMPATHY medicines reviews (n=524)

Polypharmacy indicators (potentially serious safety issues)

390 polypharmacy indicators were identified in the 524 reviews. These are indicators associated with an increased likelihood of a serious adverse outcome, due to medication and/or patient or disease factors (Scottish Government, 2017). The following categories were identified:

Indicator category	Number	%	Most common indicator
Falls	120	30.8	Two or more sedating/anticholinergic medicines in older people (n=115)
Bleeding	92	23.6	Oral anticoagulant plus antiplatelet (n=44)
Renal	42	10.8	ACEI/ARB plus diuretic plus NSAID (n=21)
Cardiac	36	9.2	Beta blocker and pulse of <60bpm (n=15)
Hypotension	22	5.6	Dementia and 2 or more BP lowering drugs and BP <130/75mmHg (n=16)
Cerebrovascular	20	5.1	AF and CHADSVASC score >=3 not prescribed an anticoagulant (n=15)
Hyperkalaemia	17	4.4	Patient on both an ACEI and an ARB (n=8)
Hyponatraemia	13	3.3	Hyponatraemia in a patient prescribed a thiazide diuretic (n=6)
Hypoglycaemia	9	2.3	Aged 75 or older on intensive hypoglycaemics and HbA1c is <53 (n=7)
Extrapyramidal	5	1.3	Aged 65 years or older and prescribed metoclopramide on repeat (n=5)
Hypokalaemia	4	1.0	Thiazide or loop diuretic and hypokalaemia (n=4)
Respiratory	4	1.0	Asthma on treatment and prescribed a non selective beta-blocker (n=4)
Bloods	2	0.5	Patient on methotrexate is not prescribed folic acid (n=2)
Dependency	2	0.5	Opioid equivalent to >180mg morphine per day (n=2)
Neurotoxicity	1	0.3	Patient on lithium is prescribed an NSAID (n=1)

Table 3: Categories of polypharmacy indicators identified by medicines reviews

The risk was fully resolved for 69%, with progress towards resolution in many of the remainder (e.g. decreasing dose with a view to stopping in an appropriate timescale; stopping one sedating/anticholinergic medicine). In some cases, it is not appropriate to address the indicator due to patient factors, e.g. active bleeding preventing prescribing of an anticoagulant).

Potentially inappropriate prescribing or prescribing omission

STOPP criteria evaluate potentially inappropriate prescribing (PIP) and START criteria evaluate potential prescribing omission (PPO) (Gallagher, 2008). Analysis for a subset of 100 patients found all had at least one STOPP or START criterion (potential prescribing omission). In these 100 patients:

- 342 STOPP criteria identified; 75% addressed
- 54 START criteria identified; 80% addressed

A younger lady with type 2 diabetes whose renal function had dropped to 38 mL/min was on 4 medications that were affecting her kidneys – metformin, lisinopril & hydrochorothiazide and telmisartan. Because of her poor renal function, she was also on the incorrect dose of sitagliptin. Medicines adjusted, with substantial improvement in renal function.

Person-Centred Medicines Appropriateness Index

The Medicines Appropriateness Index is an implicit measure of the appropriateness of a patient's medicines (Hanlon, 1992). It has been adapted by the project in order to better reflect the person-centred approach.

In 27 cases where pre- and post- PC-MAI has been assessed, a large difference between pre- and post-review PC-MAI is seen. Mean summated PC-MAI reduced by 21.2, from 27 pre- to 5.7 post-review. Mean average PC-MAI reduced by 1.5, from 1.9 pre- to 0.4 post-review.

Economic analysis

Although the primary purpose of polypharmacy reviews is in deriving clinical and quality of life benefits, they also deliver long-term direct and indirect economic benefits.

A direct reduction in drug expenditure and reduction in medicines waste is being realised. Indirect economic benefits are anticipated through freeing up capacity through fewer unscheduled hospital admissions and contacts due to adverse drug reactions (ADRs) and patients stabilised on fewer medicines requiring less contact with health professionals. (Scottish Government, 2018)

The SIMPATHY (Mair, 2017) Economic Analysis Tool is being used by the iSIMPATHY project to provide a high-level analysis of the economic costs and benefits associated with polypharmacy reviews.

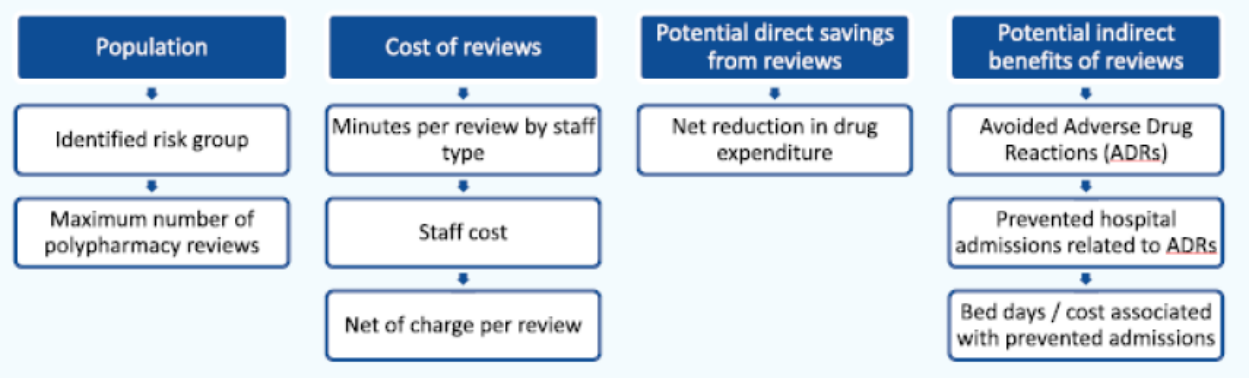

Figure 2: The SIMPATHY Economic Analysis Tool

The interim economic analysis, based on 524 reviews, identifies net cost savings of €262 per review. This is based on the following:

Costs of service	**450 reviews per pharmacist per annum**	
	Costs per pharmacist (€)	**Cost per review (€)**
Pay costs		
Senior pharmacist - midpoint consolidated payscale	69539	
Employer PRSI Class A1 @11.05%	7684	
Total pay including ER PRSI	77223	172
Non-pay costs @10% of pay		
Travel, subsistence, laptop, mobile, software licences	6954	15
Pharmacist total pay + non-pay costs	84177	187
Practice grant		
GP time @€17.50 per review	7875	18
Total costs	**92052**	**205**

Table 4: Costs associated with delivering the iSIMPATHY model

Savings of service	450 reviews per pharmacist per annum	
	Costs per pharmacist (€)	**Saving per review (€)**
Direct drug costs avoided		
Net reduction in drugs (-2.05 per review)	202,950	451
Indirect costs avoided		
Potentially avoided bed days (25% of hospital ADR admissions avoided)	6,737	15
Total savings	**209,687**	**466**

Table 5: Savings associated with delivering the iSIMPATHY model

Net benefit-cost ratio	450 reviews per pharmacist per annum	
	Per pharmacist (€)	**Per review (€)**
Total costs	92,052	205
Total savings	209,687	466
Net savings	**117,635**	**261**

Table 6: Net savings associated with delivering the iSIMPATHY model

The 1223 reviews delivered by the project to 8th February 2022 are delivering €569,918 in savings to the HSE, as costs of the project covered by project funding. The figures above indicate costs and savings to the HSE if the model was sustained beyond the end of the project.

An additional economic analysis will be applied by the project. This assigns a costing of harm averted for each pharmacist's clinical interventions using the University of Sheffield, School of Health And Related Research (ScHARR) model (Karnon, 2008; Newman, 2012, Miller, 2016, Ramsbottom, 2017). Applying this costing to our preliminary data, £ sterling 821 - £1,810 would be saved on average per review.

Potential harm (Eadon score)	**Mean estimate of cost of harm (£)**	**Number of issues**	**Cost avoidance (£ sterling)**
Moderate (5)	713-1484	175	124,775 - 259,700
Minor (4)	65-150	5150	334,490 - 771,900
Unlikely (2-3)	0-6	1354	0 - 8,124
Total (524 reviews)		6679	459,265 – 1,039,724
Total per review			**876 – 1,984**

Experience

Patient and carer experience

Patient, carer and family acceptability is high, with all but a handful of patients engaging with their review and a high level of willingness to engage in shared decision making around changes. Patient feedback to the pharmacists and GPs has been very positive. In the small number of cases where patients have been uncontactable after agreeing to have a review, the pharmacist communicates any safety issues they have identified to the GP.

Some examples of patient feedback include:

James

“When I was out walking some time ago I used to get quite dizzy. I was taken off a couple of tablets and now I feel great again. I think it’s a great thing to have a review… I think everybody should have a review.”

Molly

“I have a huge interest in medicines and an aptitude for understanding medicines. I am interested especially in compatibility of medicines and how one can conflict with another. With increasing age, many complications can arise and for this reason is very important to review medicines. It also allows me to better manage my own health. Any review, research or developments are important to our health. I hope this continues.”

Patsy, on behalf of wife Bridget

“nobody has ever taken the time to explain Bridget’s medications so comprehensively but in a way that was so easy to understand. It was a wonderful conversation to listen to and I hope that this becomes a regular part of our care.”

88% of patients reported improvements in at least one domain of Patient Reported Outcome Measures in an analysis of 100 consecutive completed reviews. Most patients reported improvements in understanding and experience of adverse effects (ADRs, adverse drug reactions), with a smaller proportion reporting improvements in their ability to carry out activities of daily living (ADLs) and/or compliance with medication post-review.

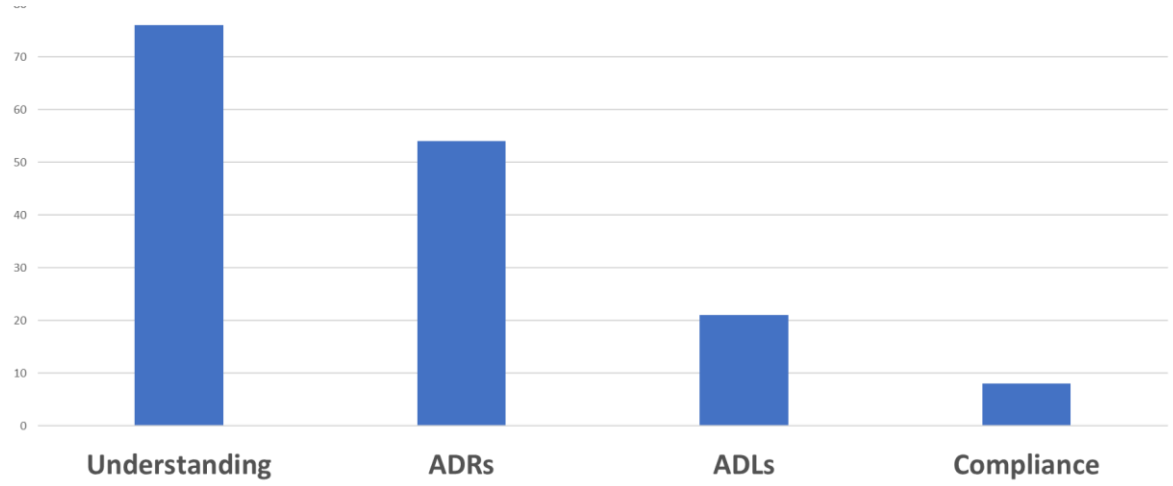

Figure 3: Patient reported outcome measures (n=100). Patients reported if they noticed improvements in their understanding of their medicines, in their experience of adverse drug reactions (ADRs, side effects), in their ability to manage the activities of daily living (ADLs) and in their compliance or adherence with medicines.

GP experience

Impressions from project GPs and pharmacists are overwhelmingly positive, welcoming the pharmacists' knowledge, communication skills and the capacity they bring to patient care and the practice. The project is perceived to benefit patients and GPs and there is unanimity in support for the clinical pharmacist role in project practices and more broadly. GPs' capacity (time available) to engage with the project is a challenge raised by both GPs and pharmacists.

All project GPs who responded to a survey (n=10) in July 2021 agreed that;

- iSIMPATHY is having a positive effect on patient safety (avoiding adverse drug reactions), patient quality of life, satisfaction, understanding, adherence and quality of patient care.
- iSIMPATHY is having a positive effect on GP job satisfaction, knowledge and understanding.
- Pharmacist knowledge and skills, capacity to carry out and follow up on reviews (time available) and pharmacist communication with the patient are facilitating project success.
- All are not only in favour of the continuation of pharmacy presence in their practice beyond the life of this project but they would encourage integration of more clinical pharmacy roles within the primary care setting in the future.

Feedback from GPs includes the following;

- "… the iSympathy project contributes in a tremendous way to our practice. We no longer look at patients on large numbers of drugs and wonder where to start with their rationalisation. As you are well aware, these are generally old and / or vulnerable people in

society. In the past we may have tried to rationalise their medications, but this is too time consuming an endeavour for GPs. That is apart from the fact that pharmacy is not our speciality.

- … her instant availability to advise us regarding other drug related issues in the practice. This has been a godsend. I now change patients from one drug to another in a much safer manner than I have done in the past. I get the most up to date advice on appropriate medications in certain complex patients instantly. I am saved hours on the phone explaining drug changes to patients. Some of our practice protocols have been updated with Emma's help."

Dr Majella Grealish, Bayview Family Practice, Ballyshannon

"From my point of view, Leon's work and input are invaluable. His approach is patient-centred, encouraging, and empathetic. I have had only positive feedback from the patients, who are willing to either take, cut down, change, or cut out certain medication.

His suggestions of change are always backed by guidelines, which he presents in typed format, making the changes easy to understand and comply with.

I know I now find myself much more aware of polypharmacy and non-compliance, and I am putting some of what Leon has suggested into practice so it's a win-win situation for both doctors and patients. And I would imagine that the cost-effectiveness of the project will be evident, very soon."

Dr Grace Kenny, Dundalk

Community pharmacist experience

"As a community pharmacy we can flag a lot of things clinically and ethically but quite often it is hard for us to actually get traction on these things… As a result Emma's work has been invaluable to us. … I can direct Emma towards the type of patients that I'm having problems with, problems within their medicines and with polypharmacy."

Eoghan Maguire, Bundoran

iSIMPATHY Pharmacist experience

All project pharmacists (n=4) feel that iSIMPATHY is having a positive effect on patient safety (avoidance of adverse drug reactions), patient quality of life, satisfaction, knowledge and understanding, adherence and quality of patient care (HSE survey, July 2021).

"Patient uptake and reported experience has been very positive so far. Patients are extremely satisfied with the level of attention and detail that is paid to their care, as are my colleagues within

the practice. Addressing appropriate polypharmacy is heavily dependent on a multidisciplinary team approach. The role of the iSIMPATHY pharmacist is very complementary to the care that GPs, nurses and community pharmacists already deliver in primary care. The overwhelming impression is that no other professional has the time available to spend with patients to begin to address these major safety concerns. In my experience to date, non-adherence has been a major contributing factor to therapeutic failure. iSIMPATHY has given patients an opportunity to voice concerns relating to their medications and be involved in future planning to overcome issues. Appropriately pitched patient education has been a large part of the discussion with patients". Pharmacist A

Risks and challenges

The project risks and issues are being managed closely, with many initial risks averted. This includes integrating the project staff and governance into the CHO structures and the project pharmacists with the GP practice teams, making reviews accessible and acceptable to patients and making reviews acceptable and quick for GPs to action. The COVID-19 pandemic has brought challenges but enabled ways of working which have enhanced efficiency and met patient, practice and pharmacist needs. These include a move to partial remote working for pharmacists and provision of reviews by telephone, which most patients continue to prefer although face to face reviews are now available.

Recruitment delays reduced the pharmacists' time on the project, however early identification of this enabled our team to recruit a fourth pharmacist on a half-time basis. The project end date has been extended to February 2023 and we are seeking approval to use projected underspend to recruit an additional pharmacist for the remainder of the project and to increase hours for one of the current pharmacists. Recruitment delays to the Project Management Lead post largely due to the enhanced approval process required for a grade VIII post required the Work Package Lead to provide this support until the Project Management Lead commenced post in late April 2021.

Current risks and issues include:

- Achieving project deliverables in the reduced project delivery time.
- Maternity leave of one of the project pharmacists in 2022.
- GPs challenged to action reviews due to time constraints exacerbated by Covid.

The project team is monitoring deliverables closely and utilising quality improvement and shared learning to streamline processes and workflow.

Sustainability and spread

The iSIMPATHY project delivers comprehensive medicines reviews through introduction of a dedicated skilled clinical pharmacist resource to primary care services in GP practices. Reviews incorporate consideration of the patient's perspective and shared decision making, medication and clinical history, laboratory and diagnostic results, the pharmacist's and GP's perspective. This approach is delivering a large volume of reviews, reducing polypharmacy and improving the appropriateness of medicines. The reviews address multiple issues per review, substantially improving patient safety, quality and appropriateness of prescribing, patient understanding and experience and GP job satisfaction and knowledge.

The iSIMPATHY approach is proving to be a very successful model, with substantial benefits and acceptability. The high levels of polypharmacy and potential to address multiple potentially inappropriate medicines per patient seen in project practices are likely to be representative of similar needs across the country.

Achieving sustainability and spread of this approach is an important aim and challenge, with actions underway to maximise the potential for support for the approach in future planning.

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For more information, please contact:

Celine Croarkin
Project Management Lead, HSE iSIMPATHY
Health Services Executive Community Healthcare Organisation 1 and 8 (Louth)
celine.croarkin@hse.ie

Ciara Kirke
Work Package Lead, HSE iSIMPATHY
Clinical Lead, National Medication Safety Programme,
Health Services Executive National Quality & Patient Safety Directorate
ciara.kirke@hse.ie