Health Innovation West Midlands

Health Innovation Network Polypharmacy Programme

Local Training & Delivery Evaluation Report

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healthinnovationwestmidlands.org

Contents

Glossary of Abbreviations

No.	Abbreviation	Expanded Meaning
1	**ACB**	Anticholinergic Burden
2	**ACP**	Advanced Clinical Practitioner
3	**AHP**	Allied Health Professions
4	**ALS**	Action Learning Sets
5	**ANP**	Advanced Nurse Practitioner
6	**CoP**	Community of Practice
7	**COPD**	Chronic Obstructive Pulmonary Disease
8	**CPD**	Continuing Professional Development
9	**CPPE**	Centre for Pharmacy Postgraduate Education
10	**DES**	Directed Enhanced Service
11	**GP**	General Practitioner
12	**HCP**	Health Care Professionals
13	**HEE**	Health Education England
14	**HIN**	Health Innovation Network
15	**HIWM**	Health Innovation West Midlands
16	**ICB**	Integrated Care Board
17	**MDT**	Multidisciplinary Teams
18	**NIHR**	National Institute for Health and Care Research
19	**NHSBSA**	National Health Service Business Services Authority
20	**NICE**	National Institute for Health and Care Excellence
21	**PCN**	Primary Care Network
22	**PPI**	Proton Pump Inhibitor
23	**QI**	Quality Improvement
24	**QOF**	Quality and Outcomes Framework
25	**SDM**	Shared Decision Making
26	**SMR**	Structured Medication Review
27	**SMRs**	Structured Medication Reviews
28	**SSRI**	Selective Serotonin Reuptake Inhibitor
29	**START**	Screening Tool to Alert to Right Treatment
30	**STOPP**	Screening Tool of Older Persons' Prescriptions
31	**vPW**	Virtual Polypharmacy Workshops
32	**WM**	West Midlands

1. Executive Summary

1.1 Key Overview

The Health Innovation Network's Polypharmacy Programme was delivered locally in the West Midlands to address problematic polypharmacy, a significant contributor to medicines-related harm and NHS workload. Anchored in the national 3-pillar approach—population health management, education and training, and public behaviour change—the local delivery centred on ten cohorts of bespoke virtual Polypharmacy Workshops (vPW), supported by data driven risk stratification dashboards, a regional Community of Practice (CoP), and the testing, evaluation and dissemination of patient-facing resources. Between September 2023 and March 2025, 171 clinicians completed all three sessions of the vPW, comprising pharmacists (82%), GPs (7%), and other primary care professionals (11%).

1.2 Objectives

The programme aimed to equip clinicians with the confidence and skills to conduct high-quality Structured Medication Reviews (SMRs), reduce problematic prescribing through evidence-based deprescribing and medicines optimisation, and embed shared decision making (SDM) into patient consultations. Specific objectives included: (1) increasing awareness of the risks of polypharmacy, (2) improving the ability to identify high-risk patients using data-driven methods, (3) increasing primary care knowledge, skill and confidence at reviewing multiple medications and deprescribing where appropriate (4) promoting adoption of deprescribing frameworks and clinical tools such as STOPP/START, and (5) supporting service improvement via implementation of Quality Improvement (QI) projects in primary care practices.

1.3 Evaluation Methods

Evaluation of local bespoke vPW combined real-time in-session polls (25 per cohort), a detailed post-session questionnaire (33 questions), and submission of delegate action and implementation plans. Across the three workshops, 79% of delegates participated in polls, generating 1,337 responses for analysis. Post-session feedback was completed by 104 of 161 eligible participants (65%), providing robust quantitative and qualitative insights. Additional evaluation was captured through voluntary reporting of QI projects, case studies, and delegate reflections on practice changes following participation.

1.4 Key Results

The vPW achieved strong engagement and impact. Session attendance retention was high, with 88% of delegates completing all three workshops. Overall satisfaction was strong, with over 80% rating sessions 4 or 5 out of 5. Confidence to conduct SMRs and deprescribe safely increased substantially: 48% rated themselves at 6 out of 10 or higher at baseline figures

compared to 82% by the end of the programme. Post-course surveys showed 89% agreed or strongly agreed that training improved their ability to use data to identify at-risk patients, and 91% reported increased understanding of SDM. Tool uptake was significant: 93% of delegates reported using at least one tool introduced, with 72% using two or more. Notably, STOPP/START, GP Evidence, and the PrescQIPP IMPACT tool were most frequently adopted. Impact on practice was further evidenced by 38% of delegates planning QI projects.

1.5 Summary of Recommendations

Recommendations for future delivery include strengthening delegate recruitment to help maintain minimum session sizes critical for peer learning. To bridge the gap between knowledge and implementation, structured post-workshop support such as mentorship and action learning groups is advised however, delivering this would require a greater allocation of HIWM resource, which must be balanced against existing capacity constraints. Finally, feedback highlights the value of integrating real-world case studies and clinical scenarios to strengthen practical application of SDM and ensure learning translates into sustained improvements in patient care.

2. Introduction

2.1 Background & Context

In England, the NHS primary care system issues over 1 billion prescription items annually. As people are living longer and often with multiple long-term health conditions the number of medicines the population will use is expected to rise. This can lead to a significant burden for individuals managing several medication regimens and, in some cases, may result in harm.

Problematic polypharmacy places a strain on the healthcare system and compromises the quality of patient care—despite being largely preventable. The Health Innovation Network's National Polypharmacy Programme focussed on addressing problematic polypharmacy at the local level.

The programme supported the routine use of NHSBSA Polypharmacy Prescribing Comparators through national webinars, education, and training—enabling healthcare professionals to identify and prioritise patients for SMRs. Evidence-based Polypharmacy Action Learning Sets (ALS) were rolled out nationwide to equip GPs, pharmacists, and other prescribing professionals with the skills and confidence to safely review and discontinue inappropriate medications.

In partnership with patients, the public, and academic experts, the HIN also co-designed and evaluated public-facing resources to shift perceptions around prescription medicines encouraging patients to speak openly about their concerns and expectations regarding medication.

The programme was delivered via the unique 3-Pillar approach. This strategy was designed to holistically target the whole medicine review process from start to end. The key pillars of the programme to deliver the most impact at primary care level:

Pillar 1: Population Health Management	Pillar 2: Education and Training	Pillar 3: Public Behaviour Change
Using data (NHS BSA Polypharmacy Comparators) to understand PCN risks and identify patients for prioritisation for a SMR.	Investing in expert Polypharmacy Trainers and delivery of Polypharmacy ALS and the locally delivered vPW to upskill the primary care workforce to be more confident about stopping unnecessary medicines. The ALS model was originally developed and piloted by Health Innovation Wessex and supported by HEE.	Local testing and evaluation of public-facing initiatives to change public perceptions of prescribing and encourage patients to open up about medicine concerns and expectations.

Table 1 – The National Polypharmacy Programme 3-Pillar Approach detailed

The HIN National Polypharmacy programme ran from Apr 2022 and officially concluded in September 2025. In addition to the national delivery across the network, each participating HIN had its own local delivery strategy which catered to its local population, utilising the 3-pillar strategy as its foundation.

Polypharmacy training was deemed essential in the West Midlands to address rising levels of multimorbidity, reduce medication-related harm, tackle health inequalities, support NHS policy implementation, and empower healthcare professionals to deliver safer, more person-centred prescribing. Taking this into account the HIWM team built their own strategy around the 3-pillars to deliver the programme locally:

Local Pillar 1 - Bespoke Data Packs for GP Practices

In collaboration with the East Midlands Analytics and Evaluation Service, the team created a West Midlands-wide dashboard covering all practices and PCNs across six ICBs. This enabled the production of tailored data packs for each practice, highlighting 25 key data points.

Each data pack broke down key indicators by patient age group, helping clinicians identify high-risk populations. Equivalent to running 25 ePACT2 searches, the data packs saved time by eliminating the need for manual system queries. These packs supported Pillar 1 by helping practices to pinpoint at-risk groups and were also covered in detail during vPW under Pillar 2.

Local Pillar 2 – virtual Polypharmacy Workshops (vPW)

From Sept 2023 to Mar 2025, 171 clinicians across 10 cohorts participated in local bespoke Polypharmacy virtual workshops developed by HIWM, led by accredited Polypharmacy educators. Aimed at improving SMRs, each cohort completed three 3-hour interactive sessions featuring group work, polls, and discussions.

Clinicians were also supported to develop optional QI projects using provided tools and templates. The workshops focused on building confidence in safe deprescribing through practical guidance and peer learning. The session breakdown is as follows:

- **Session 1** - Introduction to polypharmacy, identifying SMR patients, and using data to prioritise workload; begin creating a bespoke action plan.
- **Session 2** - Explore challenges, barriers, safe deprescribing, and tools; start reflective CPD cycle and access the polypharmacy toolkit.
- **Session 3** - Learn effective medication reviews, use patient packs, and develop detailed QI/Implementation plan.

Local Pillar 2 - West Midlands Polypharmacy Community of Practice (CoP)

To complement the programme, HIWM also set up a cross sector, cross ICB shared learning network around the topic of Polypharmacy.

The Health Innovation WM Polypharmacy CoP brought together healthcare professionals from primary care, secondary care, and academia to share best practices and drive change in thinking around deprescribing and medicines management. HIWM ran 9 CoP sessions from 2022 to 2025, with a mailing list of around 300 members. Held mainly as 1-hour lunchtime events, the sessions featured guest speakers from clinical and academic backgrounds covering topics such as:

- Discussing Pill Burden and considering the results of a large-scale NIHR Research study which looked at medication management in older people on polypharmacy living in their own homes.
- A multidisciplinary team approach looking at how Pharmacists and Technicians can work together to address problematic polypharmacy.
- Consultation models and shared decision-making.

Local Pillar 3 – Cascading and spreading the nationally developed patient facing materials

As a part of the third pillar, HIWM held a patient level focus group and tested a set of patient facing materials with a local clinician to gather feedback. This was combined with feedback from other HINs across the nation which led to the development to the "Resources to support patients having a Structured Medication Review" set of materials ready for national spread and adoption.

Locally HIWM supported the uptake of these materials by cascading links to the download page and promoting their benefits to practice. The links were received by stakeholders in a mailing list comprising of over 300 individuals. Furthermore, the materials were extensively covered and promoted during the local training.

Additionally, the local programme team also ran a separate piece of local work involving PCNs in deprived areas utilising the materials, which had been translated into a range of community languages, to improve their SMR service and communication with local communities around the harms of medicines mismanagement. A separate case study is available for this piece of work, please contact the team for more information.

This evaluation will focus predominately on the local bespoke Polypharmacy training offer (vPW) where data was gathered throughout the 10 Cohorts and has been analysed to showcase the impact the local delivery has made in the West Midlands.

2.2 Need for Training

NHS England and local ICBs, including in the West Midlands, have identified polypharmacy as a priority.

During the lifetime of the programme, the West Midlands as a region was covered by 6 ICBs delivering care to the population. Many districts in the region fall under the most deprived 20% of the population, which is the focus area for a health improvement initiative by the NHS, that aims to tackle health inequalities, called CORE20PLUS5. West Midlands is also home to the Black Country ICB which is reported to be the 2nd most deprived ICB in the country. *(Ref: https://blackcountry.icb.nhs.uk/about-us/people-we-serve).*

Furthermore, the West Midlands has a large and diverse population with a high burden of chronic conditions such as diabetes, cardiovascular disease and COPD. Many patients, particularly older adults are prescribed multiple medications, increasing the risk of inappropriate polypharmacy and adverse drug reactions.

SMRs have been identified as the best tested intervention method for optimising medicines and tackling problematic Polypharmacy. In 2023/24 an NHS England report stated that SMRs reduce prescribing by 2.7% to 9.9% in general patient populations and up to 19.5% in care homes (NHS England 2023/24 Medicines Optimisation Opportunities). With a focus on patients on 10 or more medicines, SMRs can help clinicians identify medicines that are no longer effective, duplicated, or harmful. Deprescribing them where appropriate, in agreement with the patient, via a process called shared decision making (SDM).

The vPW were developed to offer Pharmacists and other health care professionals undertaking SMRs in primary care the opportunity to upskill, build confidence and learn the importance of their medication reviews. Furthermore, factoring in the three pillars of the programme into the training enabled clinicians taking part to understand how to:

- Identify patients at most risk of harm based on local data – the number of medicines they are prescribed and their risk of adverse reactions.
- Upskill and build confidence in conducting SMRs – the best tested intervention for addressing problematic Polypharmacy.
- Use the tools and resources developed as a part of the National Polypharmacy Programme to aid shared decision making.
- Further in this report will be the breakdown of how the vPW was delivered, and the real-life impact it had on front-line practice.

3. Aims & Objectives

The aims and objectives of local delivery were to help deliver improved outcomes for the patient population at risk of harm due to problematic polypharmacy and to better equip health care professionals to tackle the issue by showing them the best approaches and showcasing useful tools and techniques that would help build confidence in practice.

The below list identifies some of the core objectives HIWM wanted to achieve when delivering this programme.

Increasing awareness of the risks Polypharmacy poses

Achieving this by running interactive workshops delivered by specially accredited front-line pharmacists, who have completed the National ALS and have a wealth of experience in tackling problematic polypharmacy. Exploring the impacts and challenges polypharmacy presents, reflecting on personal and team barriers, and reviewing NICE guidance on stopping medicines safely.

Improving the process in which patients are selected for an SMR and building confidence in conducting medication reviews

As a part of the Pillar 1 strategy the local training focussed on how pharmacists and clinicians can better identify patients who are most at risk of adverse effects from their current prescriptions.

As previously mentioned, the dashboard co-developed with East Midlands Analytics showed vital statistics on the number of patients prescribed 10 or more medicines across specific age groups. When filtered to the correct GP Practice this enabled delegates joining the course to identify which specific group within their practices population to target for SMRs.

It was also important to shed light on other tools that could be used to identify patients and help delegates to understand how they could be used to best effect. These included ePACT2 Polypharmacy Comparators, and any local ICB incentive schemes. Practices could also refer to the ICB Medicines Optimisation–chosen Polypharmacy Comparator focus table and national strategy recommendations such as the DES, NHS Medicines Opportunities document, and QOF to guide activity. Also highlighting digital platforms and risk stratification tools such as Eclipse Live, Medoptimise, Analyse Rx, Arden and Gem searches and bespoke search functions. Together, these resources enable targeted identification of patients, tracking of prescribing trends, and monitoring of improvement outcomes in line with local and national priorities.

Given this more structured and data driven way of identifying patients for a medication review, busy clinicians could prioritise workload and focus resource on patients at most risk of adverse effects from overprescribing.

Improving the understanding of deprescribing tools and risk stratification software. Exploring how they can be used to deprescribe effectively and aid shared decision making.

Using the sessions to highlight key clinical tools and resources to support safe and effective polypharmacy management and deprescribing, helping to build confidence and deprescribe safely.

These include the STOPP/START criteria for identifying potentially inappropriate prescribing and opportunities to initiate beneficial medicines, the PrescQIPP IMPACT tool for evaluating prescribing practices, and GP Evidence for up-to-date clinical guidance. Showcasing the Scotland Polypharmacy Toolkit (website) and Scotland Polypharmacy App and providing structured approaches and practical resources for medication reviews. Additionally, Medstopper is an online decision aid to help prioritise deprescribing, while the No Tears tool offers a simple checklist for safe medication review in busy clinical settings.

Also explored in the sessions were international best practice, drawing from the Canadian Deprescribing Network and the Australian Deprescribing Network, both of which offer evidence-based guidelines, algorithms, and patient communication materials.

Lastly the sessions emphasised the use of the [Resources to support patients having a Structured Medication Review](#) as a part of the Pillar 3 strategy. Including how clinicians can use these to best effect thanks to:

- Availability in a variety of languages.
- Available in a range of formats.
- Can be printed or shared digitally via email or text.
- Designed to aid shared decision making between clinician and patient.

Promoting multidisciplinary collaboration within a Primary Care setting

The sessions were designed around promoting a multidisciplinary approach to tackling problematic polypharmacy in primary care. Bringing together GPs, clinical pharmacists, nurses, specialists, allied health professionals, and social care teams to review medicines holistically, deprescribe where appropriate, and align treatment with patient goals. Using data tools such as ePACT2, Eclipse Live, and MedOptimise, the team could identify high-risk patients and discuss them in regular MDT meetings, creating shared care plans visible to all. Patient involvement, supported by materials in the "Resources to support patients having a Structured Medication Review" pack, ensured decisions are collaborative, while ongoing audits and outcome tracking measured reductions in high-risk prescribing and improvements in patient wellbeing.

Implementing changes into real-life practice

Upskilling and sharing new information are highly important but seeing the learnings being implemented in practice shows true impact. That's why as a part of the local training HIWM

gave delegates the opportunity to implement a quality improvement project at their practice. Utilising the tools, training, and resources obtained during the 3 sessions. HIWM also developed an 8-step QI project plan to help delegates shape their projects and document them accordingly.

Following these aims and objectives HIWM identified early on what the local training was looking to achieve in the region. Data captured during and post session from delegates will underpin this evaluation and has been used to identify where impact was successfully delivered.

4. Methodology

4.1 Design of the vPW

The vPW was designed around three 3-hour sessions that comprised a whole cohort. Table 2 below shows a breakdown of each session as presented to delegates. The sessions were delivered by specially accredited Polypharmacy educators with extensive front-line clinical practice experience who had also completed the National Polypharmacy ALS and progressed through an extensive train the trainer process. Additionally, a co-facilitator delivered a portion of the slides and HIWM

	Session 1	Session 2	Session 3
Content	• Definition of Polypharmacy Understanding the benefits - Why should practices have polypharmacy as a priority area of focus. • Outline different ways to identify patients for SMR. • Understand a practice level data pack which we provide and discuss how to use this to prioritiseworkload and make best use of time.	• The challenges Polypharmacy produces. • Understanding personal barriers • NICE - How to stop medication safely. • Polypharmacy Toolkit Overview – Tools and resources to support SMRs and deprescribing. • Medicolegal stance on stopping medication	**1st half** • What it is and how to do it well. • Introducing the NHSE "preparing for a medication review" patient pack, strategies on using them to best effect and the benefits they can create. **2nd half** • Protected time to turn your Polypharmacy Action Plan into a Polypharmacy Quality Improvement/ Implementation plan.
Outputs	• Begin to create a bespoke Polypharmacy Action Plan. • Understand how to design an impactful Polypharmacy QI Project.	• Start reflective CPD cycles and personal Polypharmacy Pledges. • Access to Polypharmacy Resources & Toolkit.	• Detailed Polypharmacy Quality Improvement / Implementation plan

Table 2 – Showcasing the contents of the three sessions along with the outputs that were expected from delegates.

In Session 1, delegates are introduced to the concept of polypharmacy, including its definition, benefits, and why it should be a key priority for healthcare practices. They explore various strategies to identify patients who would benefit from SMRs and learn how to utilise a provided practice-level data pack to prioritise workload efficiently and make the best use of available time. By the end of the session, students begin creating a bespoke Polypharmacy Action Plan and develop an understanding of how to design impactful Polypharmacy QI projects. This foundation equips participants with the knowledge and tools to approach polypharmacy strategically, ensuring that interventions are targeted and effective.

Session 2 builds on this foundation by focusing on the challenges associated with polypharmacy, such as clinical complexities and patient-specific barriers. Participants examine guidance from NICE on how to stop medications safely, gaining confidence in the principles of safe deprescribing. They are also introduced to the Polypharmacy Toolkit, which contains practical tools and resources to support SMRs and deprescribing efforts, alongside a discussion on the medicolegal aspects of stopping medications. Outputs from this session include starting reflective CPD cycles, making personal pledges to improve polypharmacy practices, and gaining access to the resources and toolkit. These elements encourage ongoing professional development and practical application in day-to-day clinical work.

In Session 3, the focus shifts to practical implementation. In the first half, students learn what constitutes a high-quality polypharmacy review and how to conduct it effectively. They are introduced to the HIN Resources to support patients having a Structured Medication Review patient pack, along with strategies to maximise its effectiveness and understand the benefits it can create for patients. The second half provides protected time for participants to translate their Polypharmacy Action Plans into detailed QI or implementation plans. By the end, delegates have a fully developed, practical plan ready for execution, enabling them to make immediate, meaningful improvements in patient care. This session ensures that theoretical learning from earlier stages is solidified into concrete, actionable steps, driving real-world change.

Ten Cohorts were completed between September 2023 and March 2025. Amounting to 91 hours of training delivered by the Lead Trainers and Co-Facilitators. It is also important to note that some conditions were placed upon delegates taking part to ensure commitment. These were:

- Pre-reading prior to sessions and completion of homework tasks.
- Participation in all three sessions – delegates were able to take part in a session on another cohort if they had missed one.
- Commitment to the 4- levels of involvement (see section 4.2).
- Completion of the post-session survey to receive their certificate of attendance.
- To share any QI projects to the HIWM project team.

4.2 Participant Overview

Across the 10 Cohorts between 2023-2025 there were 171 participants who completed all 3 sessions. To join, the delegates had to complete a sign-up form where they had to specify details about their roles. The key requirement HIWM set out was that all attendees must undertake SMRs in primary care. Unlike the National Action Learning sets there was no minimum experience level set. Delegates ranged from GP's, Practice/PCN Pharmacists, to Advanced Clinical Practitioners including other health care professionals involved in the SMR process at Primary Care level.

Additionally, delegates signing up for sessions had to specify their level of involvement. As mentioned, the sessions gave the opportunity for delegates to complete QI projects at their practices and even go further to become Polypharmacy Champions should they wish. By asking them to specify their level of involvement, the team were able to find those who were passionate about the subject and those who would be willing to produce a case study showcasing their QI work. The specified 4 levels of involvement were:

Level	Requirement	Timeframe
Level 1	Polypharmacy Action & Implementation Plan	Within 1 month of Session 3
Level 2	Polypharmacy Action & Implementation Plan with Case Study	Within 3 months of Session 3
Level 3	QI Project & Poster – Complete a small QI project and poster	Within 6 months of Session 3
Level 4	Polypharmacy Champion – Complete a small QI Project and Poster independently and liaise closely with HIWM project manager to support others within your PCN to engage with QI work	Ongoing (following above stages)

Table 3 – Levels of involvement for signing up to the vPW

At a minimum all delegates had to commit to Level 1. This enabled all delegates to at least consider how they could implement change in their practices via the Action & Implementation plan. A further breakdown of the participant group will be provided in section 5.1.

4.3 Evaluation Approach

The data captured for this evaluation was provided during interactive polls in-session and a feedback questionnaire post-session. Across the 3 Sessions there were 25 polls in which the delegates on the call could participate in. These ranged from questions asking delegates how confident they are at SMRs, shared decision making, what tools they currently used etc. The purpose of these polls was to gauge the impact the session had, for example capturing confidence level at Session 1 enables us to compare the impact the sessions have had once the same question is asked at Session 3.

Specifically, it looks at whether the workshops helped delegates feel more knowledgeable and confident in dealing with problematic polypharmacy, and whether the sessions led them to change the way they usually work. It also examines if the workshops successfully taught the delegates across the three pillars.

Furthermore, after the delegates had successfully completed all 3 sessions and provided their Action & Implementation plans they had the opportunity to complete the feedback questionnaire which contained 33 questions and heled the delivery team gauge the impact of the sessions.

The findings of this evaluation are underpinned by the data provided through the in-session polls and post session questionnaire.

5. Findings

5.1 Participation & Responses

Over the 10 Cohorts 171 people took part in all 3 sessions. During a session participants had the opportunity to take part in 25 polls however not all attendees provided their input. Furthermore 104 participants completed the feedback form after attending all three sessions.

An important aspect to note is that this data was analysed prior to the final Cohort being completed. Therefore, only represents 161 attendees and excludes the 10 participants from the 10th Cohort.

5.1.1 Composition of Roles

Across 9 of the 10 Cohorts 161 attendees took part in all three sessions. The table below shows a breakdown in the roles that participated:

Roles	Number of Participants	Percentage
GP	12	7%
Pharmacists	132	82%
ACP	6	4%
ANP	6	4%
Physician Associate	2	1%
Other	3	2%

Table 4 – Role breakdown for the participants who took part in all 3 sessions across 9 of the 10 Cohorts.

Based on the composition of the attendees roles we can see that the vast majority were Pharmacist roles with a smaller percentage making up GP's and various other practitioners.

5.1.2 Response rates

Figure 1 shows the attendance across the three sessions. Notably, 88% of delegates who attended the first session went on to complete all three, indicating a very low dropout rate and suggesting that participants found the sessions valuable.
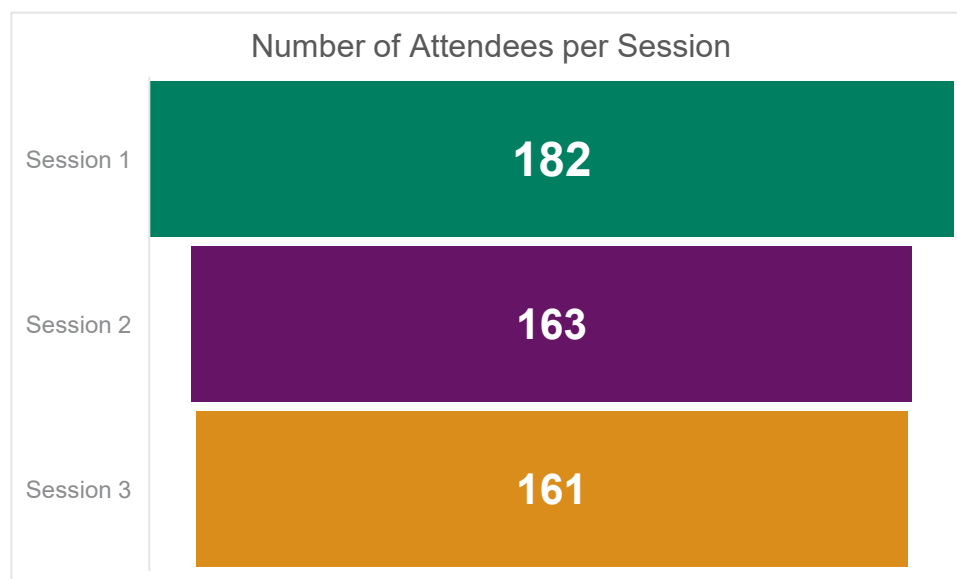
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Figure 1 – Number of attendees per session.

Completion of the post-workshop feedback questionnaire was restricted to delegates who had attended all three sessions of the course. Of the 161 delegates who successfully completed the course, feedback was obtained from 65% (n = 104). The distribution of professional roles among respondents is presented in Table 4.

It should be noted that data relating to the professional roles of individuals who registered for the course or who attended all three sessions, but did not complete the post-workshop questionnaire, were not available for analysis and are therefore not included in this report.

Role	Count	Percentage
Pharmacist	82	79%
GP	10	10%
ACP	5	5%
ANP	3	3%
Missing	2	2%
Physician Associate	1	1%
AHP	1	1%

Table 5 – Role breakdown for the participants who took part in all 3 sessions across 9 of the 10 Cohorts.

Table 5 presents the proportion of delegates responding to the in-session polls. Across all three sessions and all questions, 79% of delegates participated, indicating a strong level of engagement throughout the programme.

Question	Session 1	Session 2	Session 3	Total
Overall session rating				
Number of responses	135	111	132	**378**
Number of attendees	182	163	161	**506**
% of attendees	74%	68%	82%	**75%**
How much did today's session improve your thinking around polypharmacy?				
Number of responses	141	103	125	**369**
Number of attendees	182	163	161	**506**
% of attendees	77%	63%	78%	**73%**
How confident are you at carrying out structured medication review and stopping medicines?				
Number of responses	163	-	136	**299**
Number of attendees	182	-	161	**343**
% of attendees	90%	-	84%	**87%**
How well embedded is shared decision making into your medication review currently?				
Number of responses	160	-	-	**160**
Number of attendees	182	-	-	**182**
% of attendees	88%	-	-	**88%**
How confident do you feel about using shared decision making in your medication reviews moving forward?				
Number of responses	-	-	131	**131**
Number of attendees	-	-	161	**161**
% of attendees	-	-	81%	**81%**
Total				
Number of responses	**599**	**214**	**524**	1337
Number of attendees	**728**	**326**	**644**	1698
% of attendees	**82%**	**66%**	**81%**	**79%**

Table 6 – Numbers of attendees and number of responses to in-session poll questions.

5.2 Changes in Knowledge and Confidence

The main objective of the workshops was to improve and build knowledge, skill and confidence in deprescribing whilst factoring elements such as SDM. The data gathered from the feedback form and in session polls showed us that an impact was made to delegate confidence and knowledge as presented in the figures below.
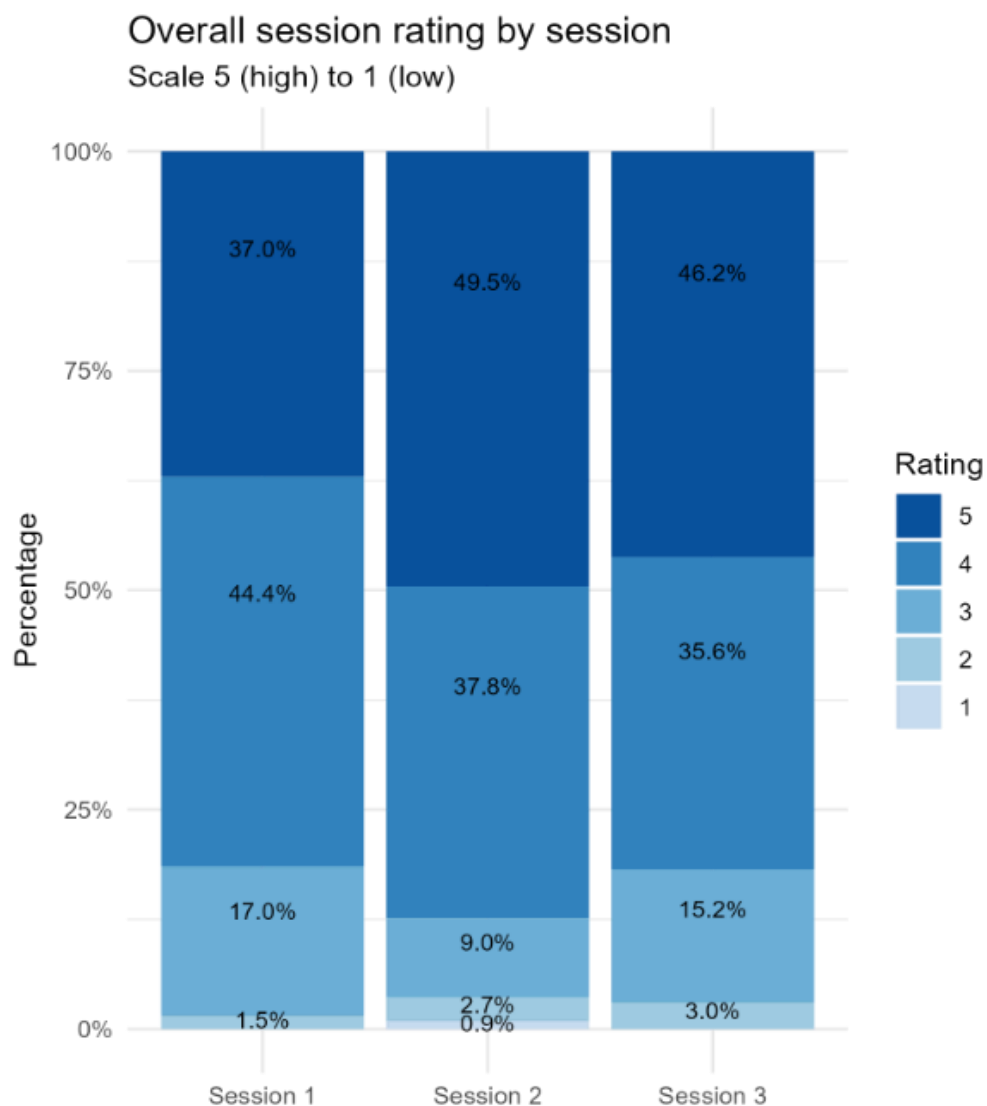
Overall session rating by session
Scale 5 (high) to 1 (low)

Figure 2 – Overall session rating Figures (Note percentages may not add up due to rounding)

How much did today's session improve your thinking around polypharmacy?
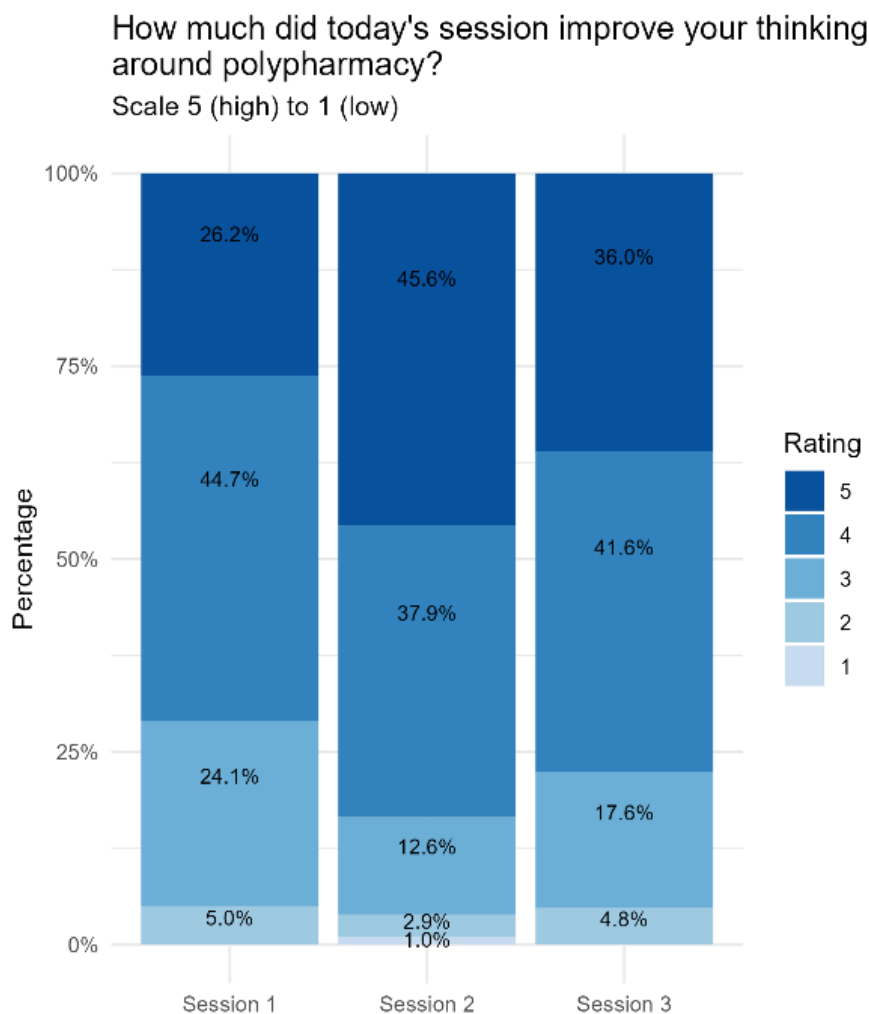
Scale 5 (high) to 1 (low)

Figure 3 – Improve thinking around polypharmacy (Note percentages may not add up due to rounding)

Analysis of the poll data demonstrates that all three sessions were evaluated positively by participants. Specifically, over 80% of delegates assigned a rating of 4 or 5 (on a 5-point scale) to each session (Figure 2). Furthermore, respondents indicated that the sessions contributed to advancing their understanding and critical thinking around polypharmacy, with more than 70% providing a rating of 4 or 5 in this domain (Figure 3).

Figure 4 - Results based on query around understanding – Post Session Feedback Survey

A total of 104 respondents completed the post-session survey and were asked to indicate their level of agreement with the workshop evaluation statements presented in Figure 4. The findings demonstrate a consistently positive response to the sessions. Specifically, 89% of participants either agreed or strongly agreed that the workshops enhanced their understanding of how to apply data-driven risk stratification to identify patients who would most benefit from a SMR. Furthermore, over 90% of respondents indicated that the training improved their ability to recognise patients at greatest risk of harm from problematic polypharmacy. A similar proportion also reported that the workshops strengthened their appreciation of the wider value of SMRs, particularly in terms of their role in addressing and prioritising problematic polypharmacy.

While not conclusive, the results imply that the workshops were highly effective in achieving their intended learning outcomes, with clear evidence of increased knowledge and awareness across all three domains assessed. Importantly, the high levels of agreement across all statements indicate that the sessions were successful not only in building technical understanding of risk stratification methods but also in reinforcing the clinical and strategic importance of SMRs. By improving participants' confidence in identifying high-risk patients and highlighting the benefits of proactive intervention, the workshops are likely to support more consistent and targeted implementation of SMRs in practice. This has direct implications for patient safety, medication optimisation, and the

overall quality of care, particularly for individuals experiencing complex or problematic polypharmacy.
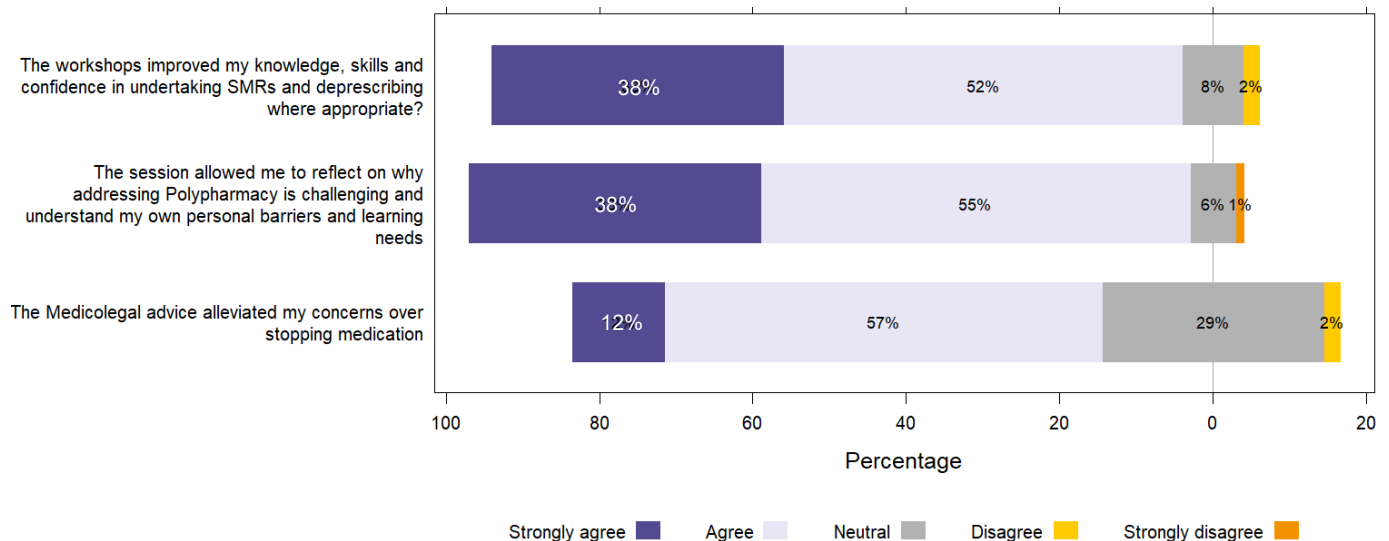

Figure 5 – Data based on results provided through in-session polls gauging confidence, understanding and usefulness of Medicolegal advice.

The in-session polls presented in Figure 5 assessed changes in participants' confidence in carrying out SMRs and making decisions around stopping medicines. Results showed a marked improvement over the course of the training. At the start, 48% of delegates rated their confidence at 6 or above on a 10-point scale. By the end of the sessions, this figure had risen to 82%, representing a substantial increase in self-reported confidence.

This shift may reflect that the workshops were effective not only in imparting knowledge but also in building practical confidence to apply learning in real-world settings. The increase of over 30 percentage points indicates that participants left the training better equipped to undertake SMRs and to make safe, evidence-based decisions about deprescribing where appropriate. Enhanced confidence in this area is particularly important, as hesitancy in stopping or adjusting medicines can often be a barrier to tackling problematic polypharmacy. These results therefore provide encouraging evidence that the programme supported the development of both competence and confidence, which are critical to embedding SMRs as routine practice.

How confident are you at carrying out structured medication reviews
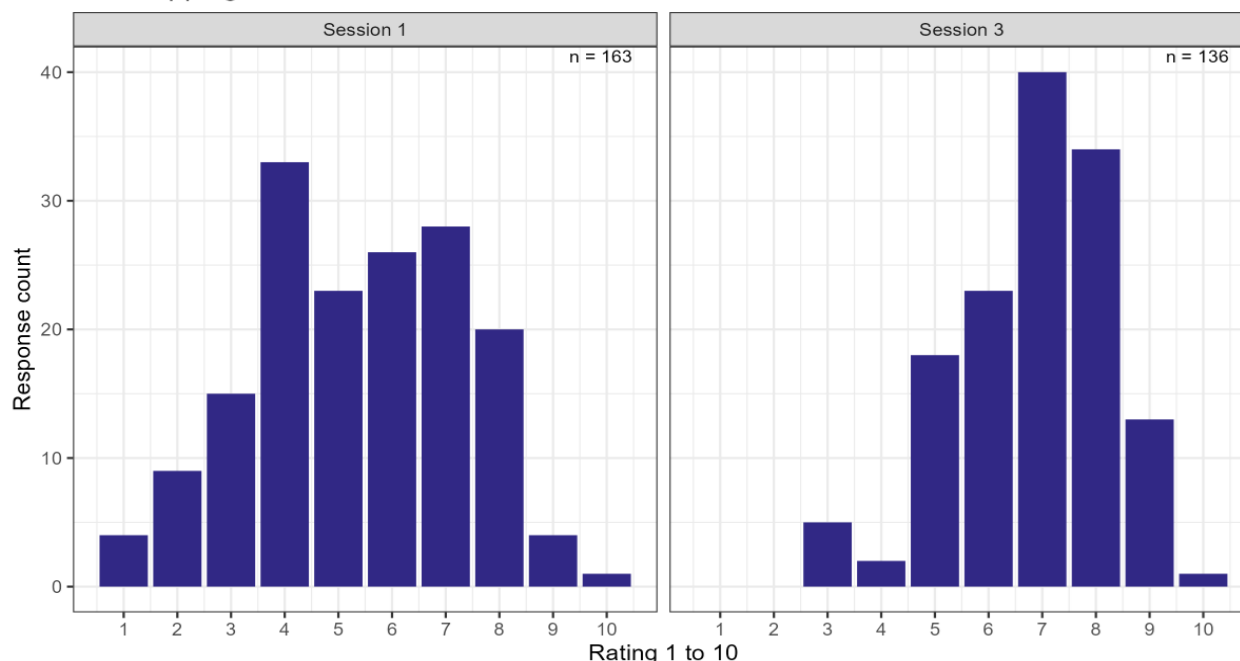and stopping medicines?

Figure 6 - Results based on polls run in both Session 1 & 3, demonstrating the change in confidence level once taking part in the workshops

The in-session poll results (Figure 6) show a marked increase in participants' confidence to carry out SMRs and make decisions about stopping medicines. At the start of the course, 48% rated their confidence at 6 or above on a 10-point scale; by the end, this had risen to 82%.

This improvement indicates that the workshops were effective not only in building knowledge but also in strengthening participants' confidence to apply it in practice. Increased assurance in deprescribing decisions is particularly important for tackling problematic polypharmacy, suggesting the training will support safer prescribing and more consistent delivery of SMRs.

5.3 Reported Practice Changes & Utilisation of Tools

One key target HIWM set when developing local delivery is the importance of impact delivered in primary care. Therefore, it was important to capture reported changes in practices and approach. As covered in previous sections the workshops showcased and discussed various tools and techniques that could be used to tackle problematic polypharmacy. Similarly different methods and approaches to conducting SMRs and promoting SDM were discussed.

Section 5.3 will look at the reported changes and use of tools following the participants time completing the workshops. This data was again gathered through in-session polls and the

post session feedback survey. This data will demonstrate the change in practice and processes at primary care level. Additionally, we have split this section via the programmes 3-Pillar approach to gauge how delegates have been able to implement it directly into practice.

5.3.1 – Pillar 1 - Population Health Management

To recap, Pillar 1 is the approach of using data to understand population health risks and support prioritisation of patients for a SMR. This primarily relates to how patients were identified for their SMRs.

"Before the workshops we identified patients requiring a SMR by"

Prior to attending the workshops, respondents were asked how they identified patients who might require a SMR. This was an open-ended question to capture the range of approaches being used in practice. As shown in Figure 7, the most common method reported was the use of searches, with 34 respondents citing searches within clinical systems, seven using ICB searches, two using PCN searches, and 13 reporting that they relied on searches but without specifying the type. Among the 34 clinical system searches, 18 were carried out using EMIS, 10 with Ardens, and three specifically noted using Ardens searches within EMIS. A further three respondents indicated the use of clinical system searches but did not provide additional detail.
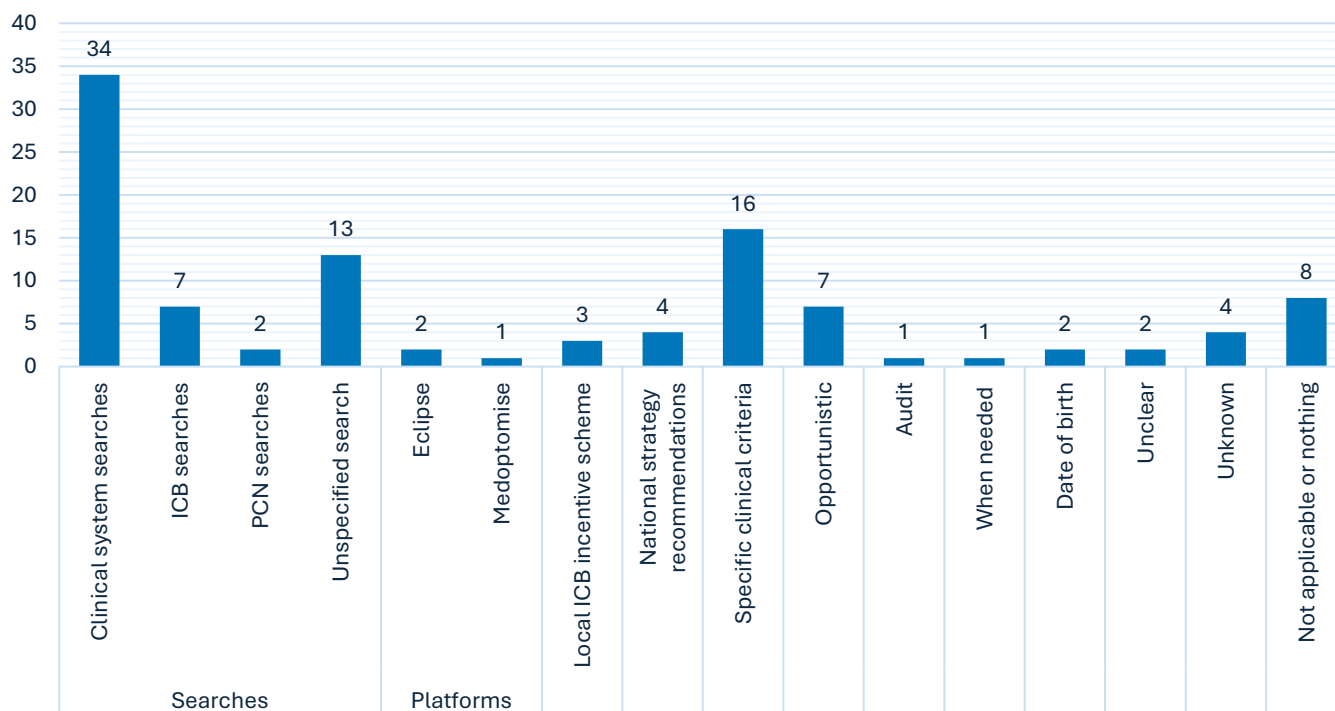

Figure 7 - Number of responses indicating different methods for identifying patients for SMR before attending the workshops

A small number of respondents reported using specific platforms to identify patients requiring a SMR, with two citing Eclipse and one mentioning MedOptimise. Three respondents indicated that their approach was informed by a local ICB incentive scheme, while four were guided by national policy drivers, including the DES (n=3) and QOF (n=1).

In addition, 16 respondents described using patient-related or clinical criteria to guide identification (Table 7). The most common approach was scheduling reviews for patients due their routine annual review (n=5). Seven respondents referred to the number of medicines prescribed, although in four cases this was combined with other factors such as care home residence, frailty, or age. Five specifically cited a threshold of 10 or more medicines, aligning with the NHSBSA Polypharmacy Comparators.

Criteria	Count
Care home resident	1
Care home resident + number of medicines (prescribed 10 or more)	2
Frailty + number of medicines (prescribed 10 or more)	1
Annual / due for a review	5
High risk groups	1
Based on number of or specific medications (no further information)	1
New patients	1
Number of medicines (no further info) + age (no further info)	1
Number of medicines (prescribed 10 or more)	2
NHSBSA/EPACT 2 comparators (no further information)	1

Table 7 – Patient-related or clinical criteria to identify patients needing a SMR

People	Count
Admin	3
Pharmacy	7
Practice team	2
Technician	1
Lead (no further information)	1

Table 8 – People and teams involved in identifying patients needing a SMR

Additional methods reported included the use of audits (n=1), identifying patients opportunistically (n=7) or on an ad hoc "when needed" basis (n=1), and selection by date of birth (n=2). A small number of responses were unclear (n=2), while four respondents stated they did not know how patients were identified, and eight indicated that no specific method was used or marked the question as "not applicable."

Of the 104 responses, 14 referred to the individuals or teams responsible for identifying patients, either instead of, or in addition to, describing the methods used (Table 8). The most frequently cited group was pharmacy staff (n=7), followed by administrative teams (n=3).

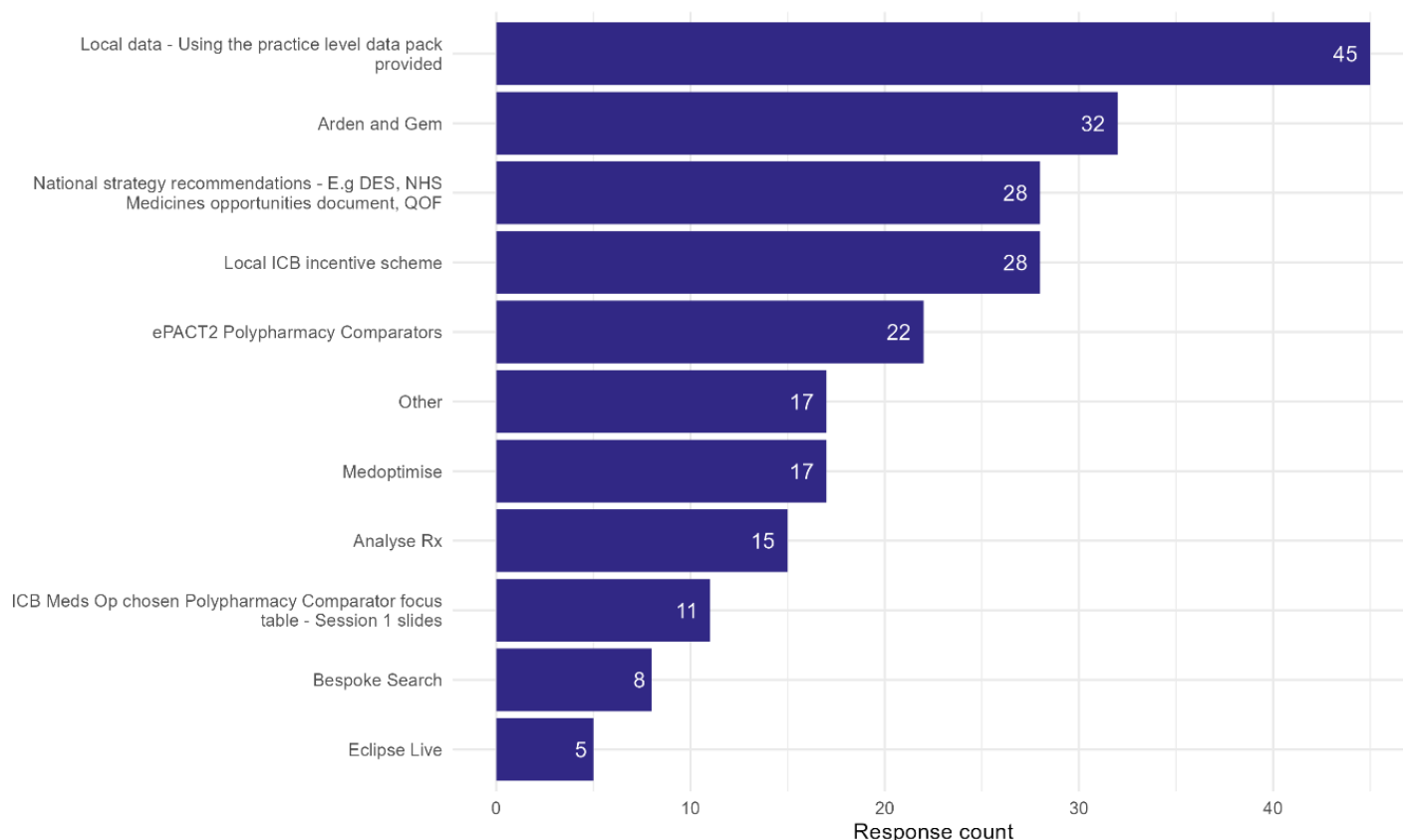**"After the workshops we identified patients requiring a SMR by"**

Figure 8 - Post workshop methods of identifying patients requiring SMR

To assess the impact of the workshops on clinical practice, respondents were asked how they now identified patients requiring an SMR. As shown in Figure 8, 90 of the 104 respondents (87%) reported adopting at least one of the recommended methods (excluding "Other"), with many using multiple approaches: 47 respondents (45%) reported using two or three methods, while 13 (13%) indicated that they were drawing on four or more. This shift suggests that the workshops not only encouraged uptake of new approaches but also promoted a more multifaceted and systematic method of patient identification.

Prior to the workshops, searches—often based on clinical or patient-related criteria such as age, number of medicines, or care home residency (see Table 7)—were the most commonly reported method. However, after the workshops, only eight respondents specifically selected "Bespoke Search," indicating a move away from relying solely on locally designed search

functions. Instead, there has been a notable increase in the use of structured data sources and formalised tools. Respondents reported greater use of practice-level NHSBSA ePACT2 Polypharmacy comparator data packs, Arden and GEM resources, national strategy recommendations, local ICB incentive schemes, and direct application of the ePACT2 comparators.

The adoption of digital tools and platforms designed to support medicines optimisation has also expanded significantly. The number of respondents using MedOptimise rose from one to 17, while AnalyseRx was cited by 15, and Eclipse Live increased from two to five. This growth highlights a move towards more standardised and technology-enabled approaches to identifying patients, reflecting both a broader awareness of available resources and greater confidence in applying them.

There were also 17 "Other" free-text responses. Of these, eight indicated no change, uncertainty, or that the method was not applicable. Five mentioned specific searches or systems (including the ACB calculator and Rio), while four emphasised the role of pharmacy teams and GP practices in identifying patients, and one referred to targeting the frail elderly population.

Overall, these findings hint that the workshops have had a tangible impact on practice by broadening the range of methods used to identify patients for SMRs. The move towards structured data, established comparators, and technology-enabled tools points to a more evidence-based and systematic approach, while continued reference to pharmacy and GP involvement underscores the importance of multidisciplinary collaboration in implementing SMRs effectively.

5.3.2 - Pillar 2 - Education and Training

To recap Pillar 2 looks at upskilling the primary care workforce to be more confident about reviewing complex medicines regimes and deprescribing where appropriate. This pillar feeds directly into the training itself as the workshops are designed to upskill and shine the spotlight on tools and techniques that clinicians may not have previously been aware of. This section will look at the impact the workshops have had on clinicians in using new tools and their usefulness.

Which of the tools have you used since attending the virtual Polypharmacy workshops?
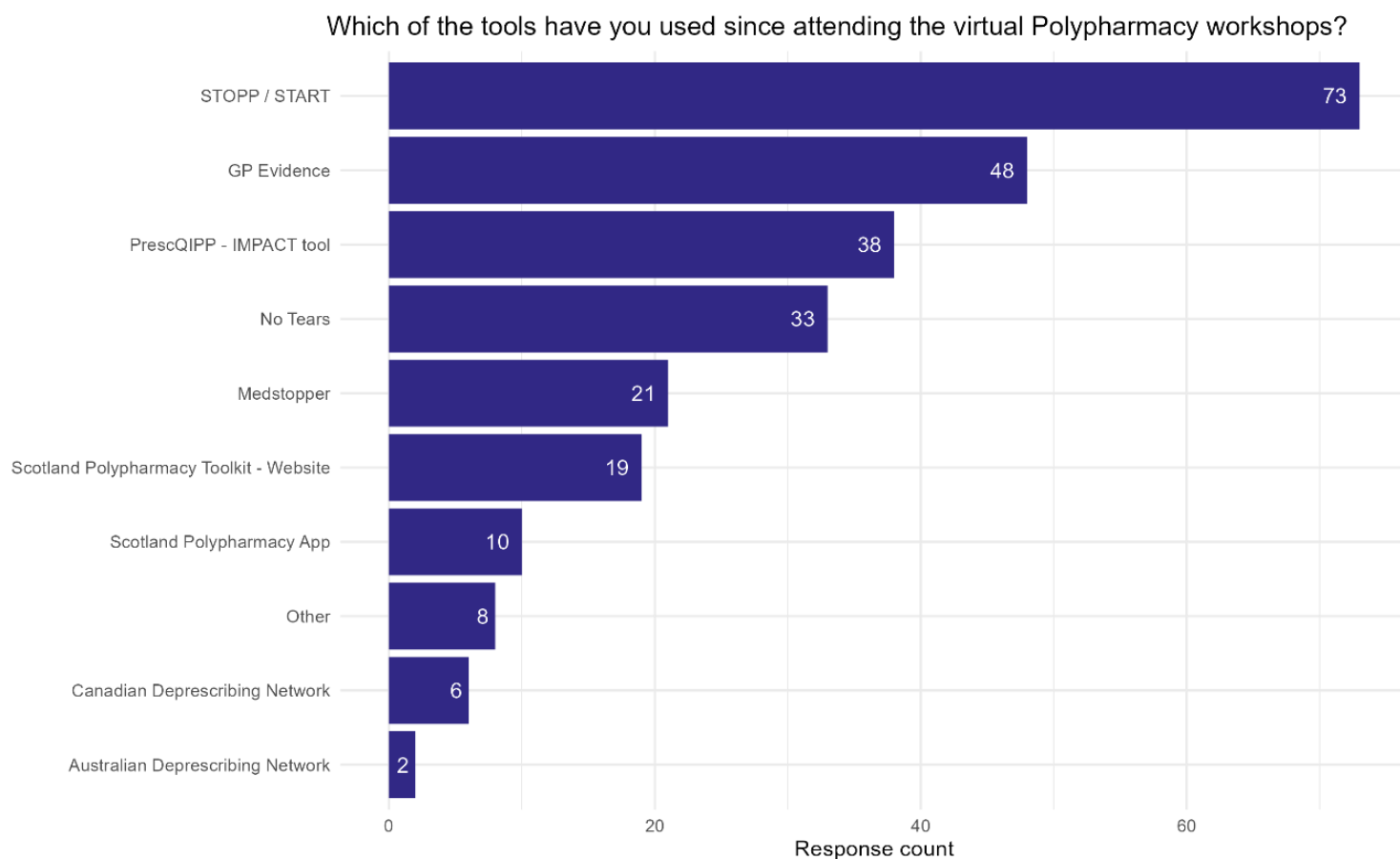

Figure 9 - Tools used since attending the workshops

Analysis of the feedback suggests a high level of uptake of the tools introduced during the sessions. Overall, 93% of respondents (n = 97) reported using at least one of the tools illustrated in Figure 9, with 72% (n = 75) indicating use of two or more. This demonstrates not only broad engagement but also a tendency towards incorporating multiple tools into practice. The most frequently utilised resources were STOPP/START, GP Evidence, the PrescQIPP IMPACT tool, No Tears, and Medstopper. Collectively, these tools provide structured approaches to medication review in polypharmacy and offer valuable support for deprescribing decisions, thereby aligning with best practice in medicines optimisation.

The eight respondents who selected 'Other' predominantly reported that the tools were not applicable to their role or that they had not yet had the opportunity to apply them. Notably, however, half of this subgroup expressed an intention to review and use the tools in the future. This finding could suggest potential for further growth in engagement as awareness increases and clinical contexts allow for greater application.

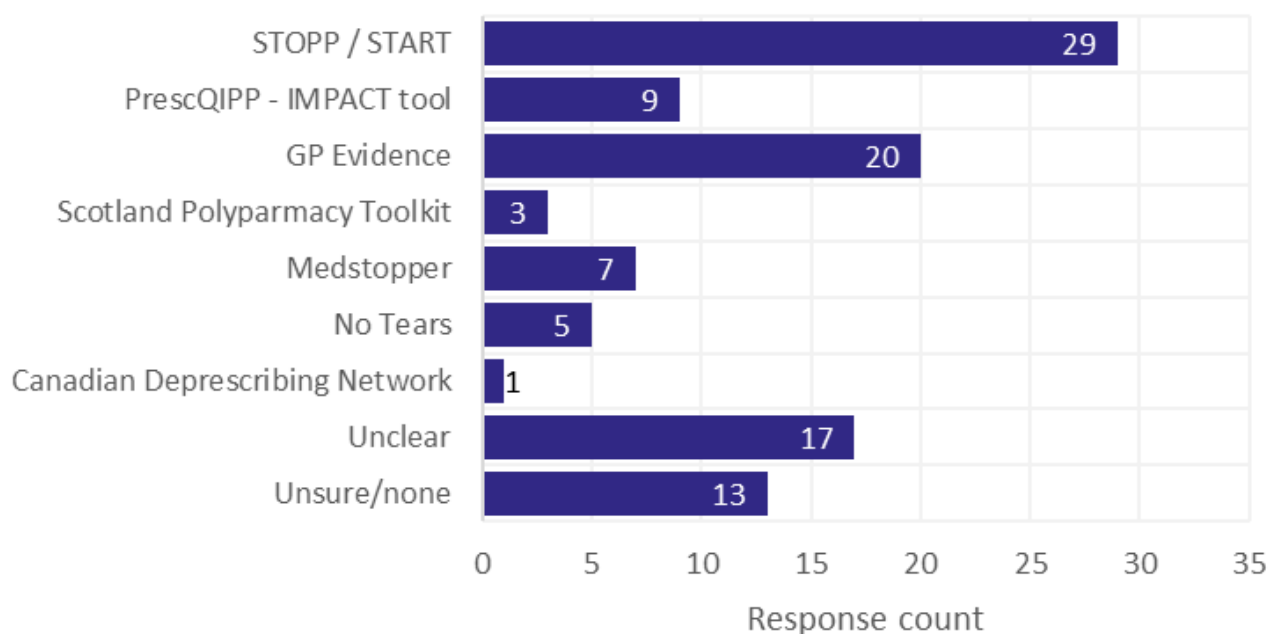## Which of the above tools do you find most useful?

Figure 10 - Tools found to be most useful

When asked "Which of the above tools do you find most useful and why?" delegates provided a wide range of responses, as illustrated in Figure 10. Among the 104 respondents to this free-text question, 71% (n = 74) identified a clear single preference, with STOPP/START and GP Evidence emerging as the most frequently cited tools. In contrast, 16% (n = 17) of responses were ambiguous, not indicating a single tool, while 13% (n = 13) reflected uncertainty or no selection at all.

In terms of reasoning, half of respondents (50%, n = 52) articulated why their chosen tool was most useful. A further 24% (n = 25) selected a tool without providing justification, while 26% (n = 27) either did not make a selection or gave an unclear response. This could indicate that while there is strong engagement with specific tools, there remains scope to strengthen participants' ability to critically reflect on, and articulate, the value of the tools in practice.

Thematic analysis of the reasons provided revealed two dominant factors: ease of use and perceived patient benefit. The STOPP/START tool was commended for its clinical relevance to older populations, practical guidance, and overall utility. GP Evidence was valued for its ability to balance benefits and harms, support patient understanding, and present information visually. The PrescQIPP IMPACT tool received positive feedback for its application in SMRs. These findings indicate that delegates are not only adopting tools but

also recognising specific features that facilitate both clinical decision-making and patient engagement.
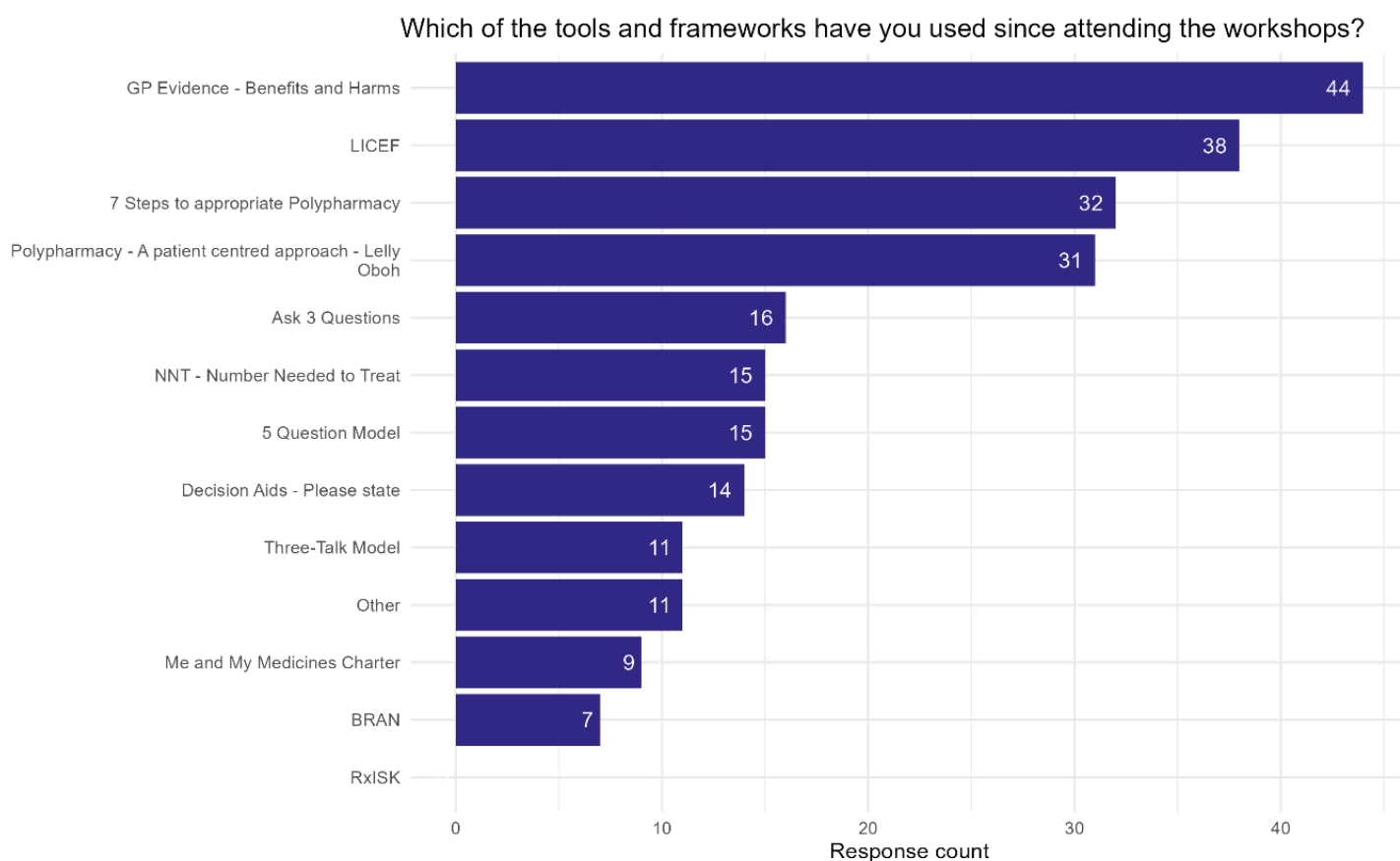
Which of the tools and frameworks have you used since attending the workshops?

Figure 11 - Tools and frameworks used by delegates following the workshops

Delegates also reported widespread use of broader frameworks and tools to support the structuring of SMR consultations and promote shared decision making (Figure 11). Ninety percent (n = 94) had used at least one such framework, and 62% (n = 64) had used two or more. Among the eleven respondents who selected 'Other,' most indicated that they had not yet had the opportunity to use the tools, although the majority planned to do so in the future; four respondents stated that the tools were not applicable. Of the fourteen who selected Decision Aids, four specified use of the NICE decision aids on statins and bisphosphonates, highlighting how nationally endorsed resources are being integrated into practice.

Taken together, these findings point towards not only strong uptake of specific tools but also recognition of their practical and patient-centred value. However, the proportion of respondents unable to make a clear selection or articulate reasoning, points to opportunities for further training and support in embedding these resources more consistently into clinical workflows.

5.3.3 - Pillar 3 - Education and Training

Pillar 3 looks at the testing, evaluation and roll-out of public-facing materials to challenge and change public perceptions of prescribing and encourage patients to talk about medicines. The analysis of this section will look at how the resources to support patients having a SMR were used by delegates. Furthermore, this section also analyses how shared decision making improved for delegates following participation in the workshops.

How well embedded is shared decision making into your medication review currently?

Figure 12 - How well embedded is SDM in delegates medication reviews – asked early in Session 1

In Session 1, delegates rated "How well embedded is SDM into your medication review currently?" on a 1–10 scale, with 10 being most embedded. Over two-thirds scored themselves 6 or above, indicating they felt SDM was already part of their practice (Figure 12). However, as SDM had not yet been formally defined or explored in depth until Session Three, these early ratings likely reflect varied interpretations, rather than consistent application of SDM principles.

How confident do you feel about using shared decision making in your medication reviews moving forward?
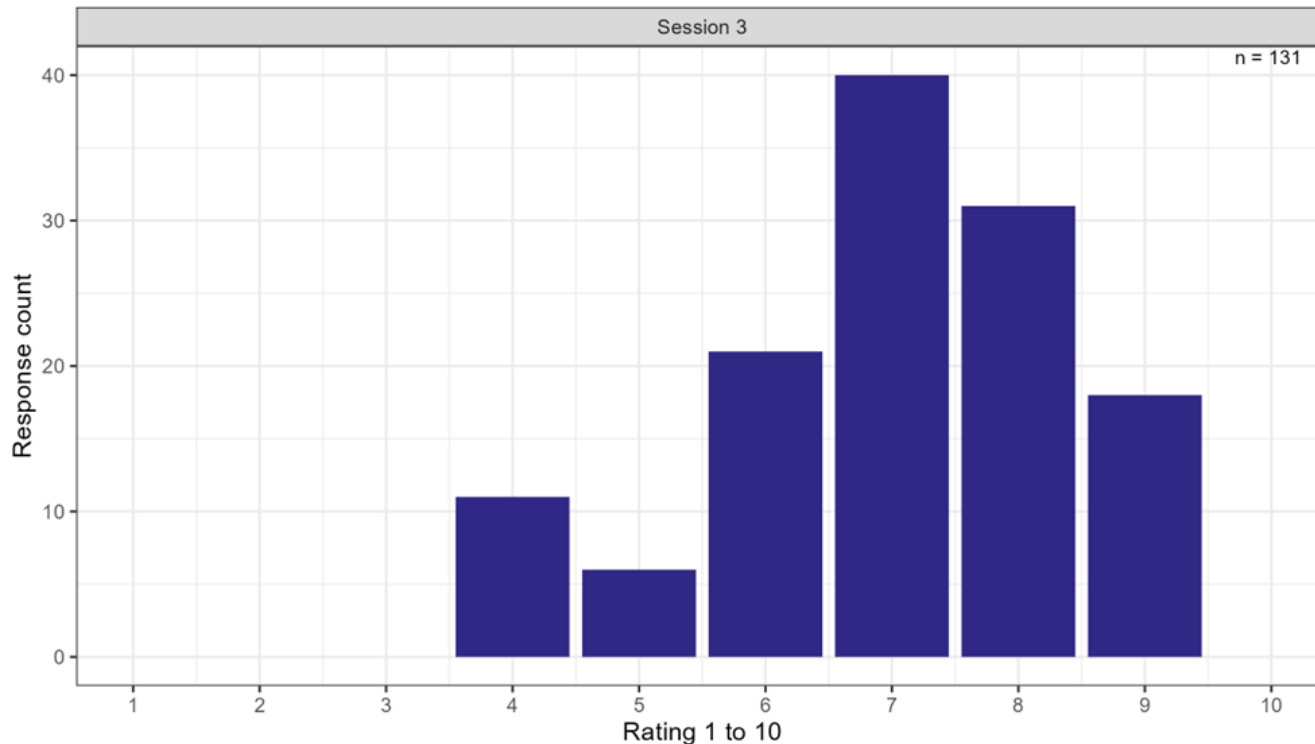

Figure 13 - Delegates confidence in SDM by end of the course

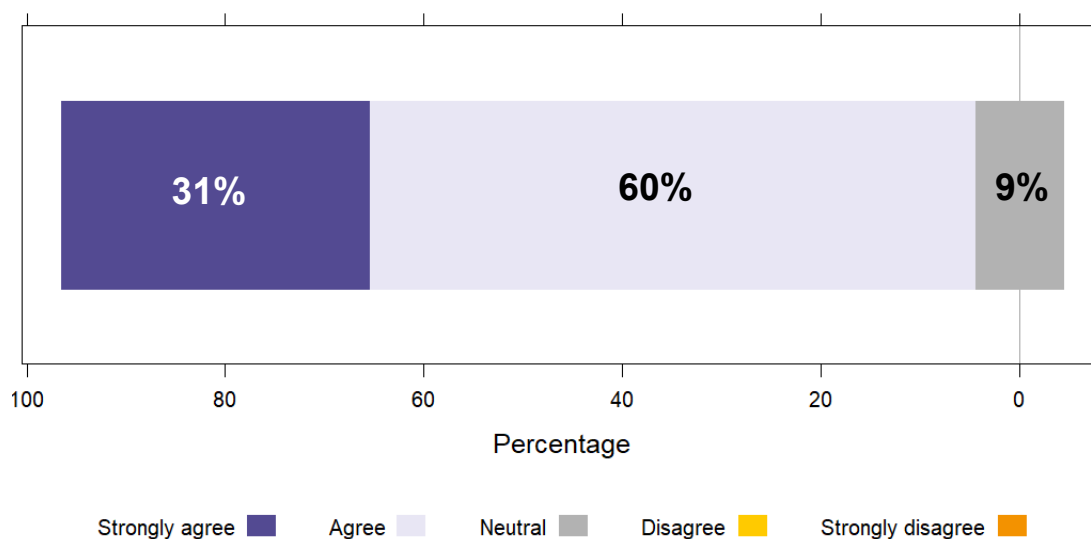**The workshops increased my understanding of SDM**

Figure 14 – Delegates understanding of SDM

In the post-session survey, 91% of delegates reported that the workshop had improved their understanding of SDM (Figure 13). Furthermore, as outlined in the Pillar 2 section, delegates indicated that they are actively applying the frameworks introduced during the workshops to support the practical implementation of SDM in their medication reviews

A core aspect of Pillar 3 was the use of the Resources to support patients having a SMR. The sessions promoted and incorporated these extensively to give clinicians the opportunity to effectively utilise them in supporting their SMRs. We were able to gather how these were used in the data captured from the sessions and post session feedback survey.
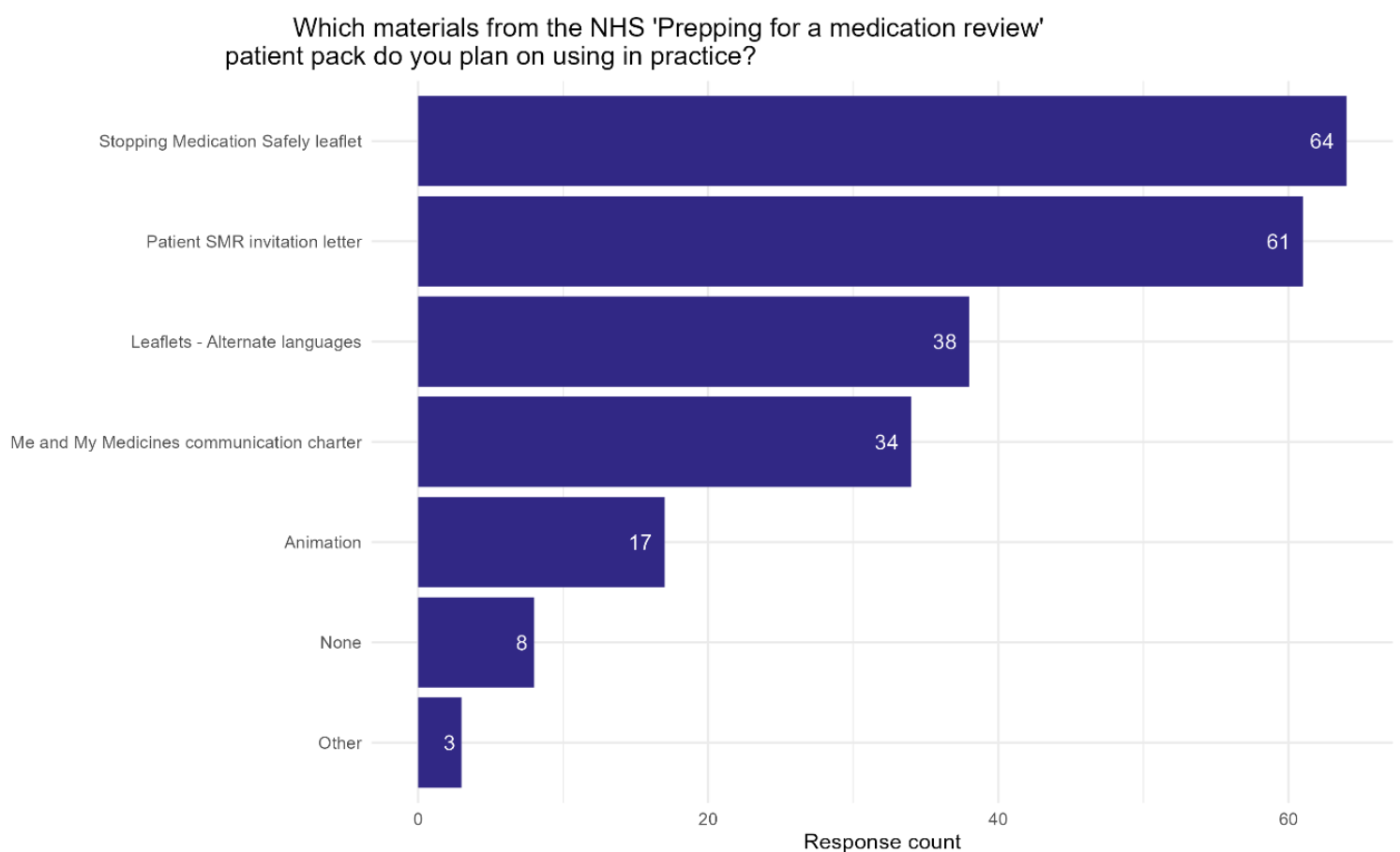
Which materials from the NHS 'Prepping for a medication review' patient pack do you plan on using in practice?

Figure 15 - Materials delegates plan to use, from the NHS 'Prepping for a medication review' patient pack

Ninety percent of respondents (n = 94) reported that they intend to use at least one of the resources from the NHS 'Prepping for a medication review' patient pack. 62% (n = 64) indicated plans to use two or more of the materials. Eight respondents stated they did not intend to use any of the resources, while among the three 'Other' responses, two reported

that they were still deciding and one mentioned the use of easy-read information and letters.

The most frequently selected resources were the Stopping Medication Safety leaflet (62%) and the Patient SMR invitation letter (59%). In addition, one third of respondents planned to use leaflets in alternative languages.

Responses to the question "If you intend to use the patient materials, how will you use them?" were often brief or too general to support detailed thematic analysis, likely reflecting different interpretations of the term 'how'. Nevertheless, several insights emerged concerning the stage of the process in which materials might be employed, the medium through which they would be delivered, and the benefits they were expected to provide.

In terms of timing, approximately one third of respondents specified when materials would be used. The most common response was before the review, with fewer indicating use during the review. References to use after the review or across multiple stages were rare.

Regarding the medium of delivery, nearly half of respondents emphasised the format of their chosen resources. Traditional approaches such as printed leaflets and letters were popular, although digital methods were also frequently cited, including AccuRx, waiting room screens, and online or text-based communication channels.

Finally, a number of responses referred to the anticipated benefits of using the materials. The most frequently mentioned category was enhancing patient information and communication, with several references to providing materials in languages other than English. Some responses also highlighted potential advantages for staff, such as supporting information sharing, standardising routines, and aiding decision-making. A smaller number linked the use of these resources to improved patient outcomes.

6. Impact and Outcomes

6.1 Quality Improvement

Having successfully delivered 10 Cohorts of the workshops with 171 attendees it's important to see how the newly learned knowledge and processes have been utilised in front line practice and how it has captivated the participants in improving their processes. The workshops have got front line workers to start thinking about how to improve processes and optimise their approaches to deprescribing.
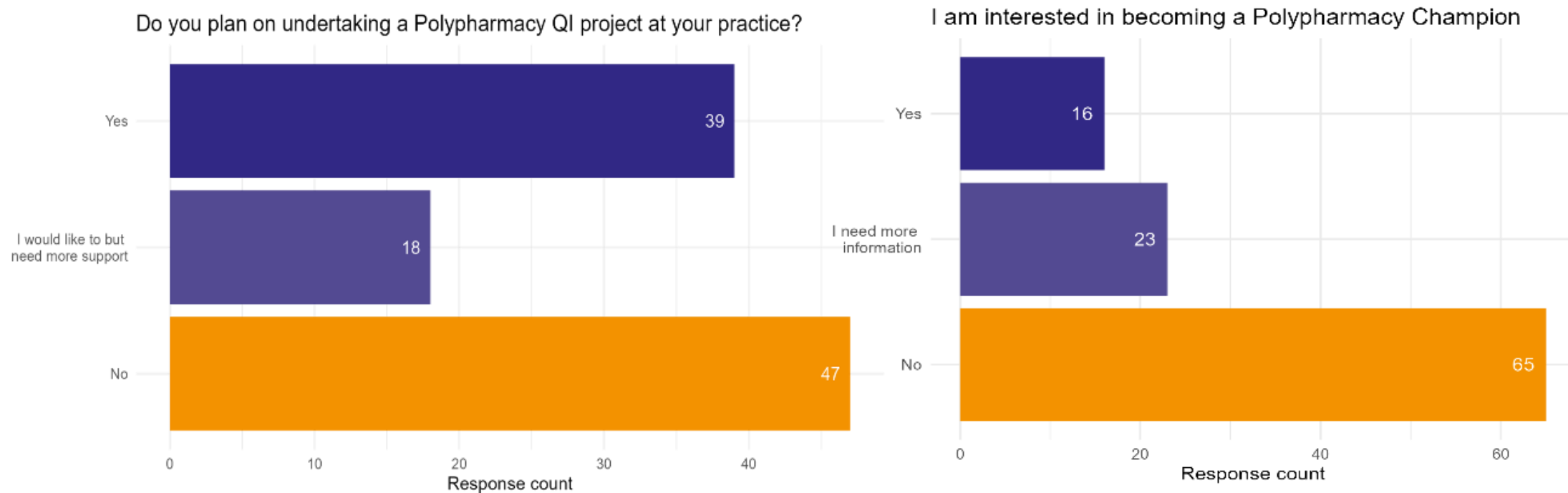
Figure 16 - Delegate plans to undertake polypharmacy QI project and those interested in becoming a polypharmacy champion.

A total of 38% of respondents (n = 39) reported plans to implement a polypharmacy QI project within their practice, while an additional 18 respondents expressed interest in doing so but indicated a need for further support. Participation in this component of the workshops was voluntary, which reflects that the workshops served as a meaningful catalyst for change despite the significant pressures currently faced in primary care. In addition, 16 respondents expressed interest in serving as local polypharmacy champions to disseminate best practices within their communities, with a further 23 respondents interested but requiring additional information before committing to such a role.

Respondents were also asked to provide further detail regarding their proposed QI projects. While the use of technical terminology and abbreviations presented some challenges for interpretation by a lay audience, clear themes nonetheless emerged among the one-third of participants who elaborated on their project intentions. The most frequently reported overarching focus was on projects addressing specific types of medication, although no single medication class was repeatedly identified. Other responses described deprescribing initiatives in more general terms. Condition-specific projects were also common, particularly those related to hypertension, hypotension, and diabetes.

Additional project areas included initiatives targeting care home residents, individuals living with frailty, and older adults more broadly. Several projects emphasised patient-centred approaches, including adaptations for patients requiring interpreters. Among respondents intending to implement a QI project (n = 39), 74% reported that the structured 8-step project plan was a useful tool in the development of their workplace 'Polypharmacy Action and Implementation Plan'.

The 8 Step Polypharmacy QI project plan helped me create a Polypharmacy Action and Implementation plan with potential to write up into QI poster
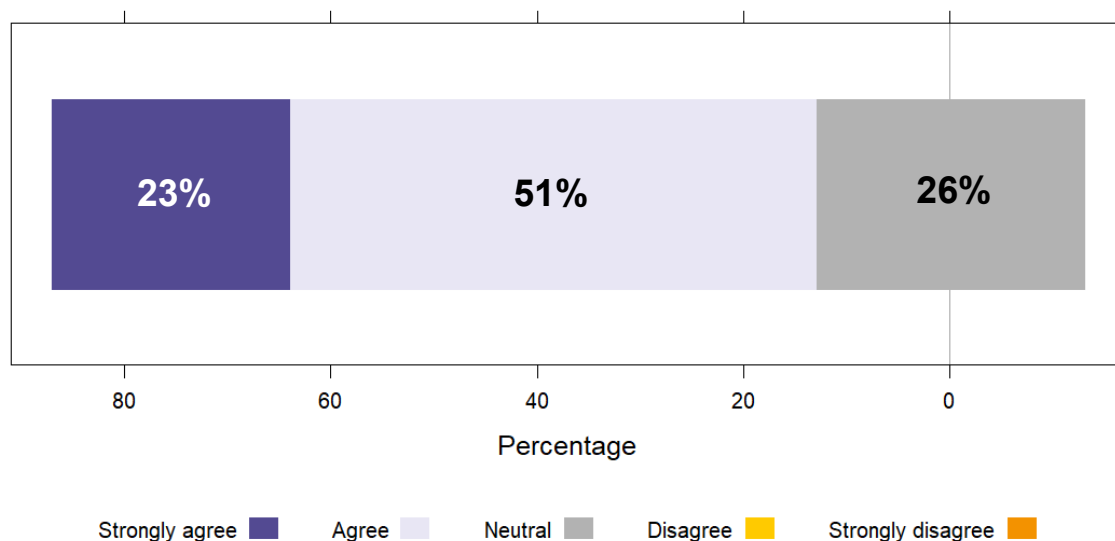
Figure 17 - Reported usefulness of 8 step polypharmacy QI project plan for delegates planning QI project

6.2 Case Studies

Two open-ended questions invited respondents to describe how attending the workshops had influenced their clinical practice and the extent to which these changes had impacted their patients. Encouragingly, the responses demonstrated relevance across all three pillars.

Delegates were specifically asked: *"Since attending the workshops, how has it impacted your practice? How does this differ from before?"*

Responses were subsequently categorised according to their central theme, with some accounts coded under multiple categories where they reflected more than one area of impact. Three overarching thematic categories were identified: confidence, changes in practice, and knowledge/awareness, each of which contained further subcategories (Figure 18).

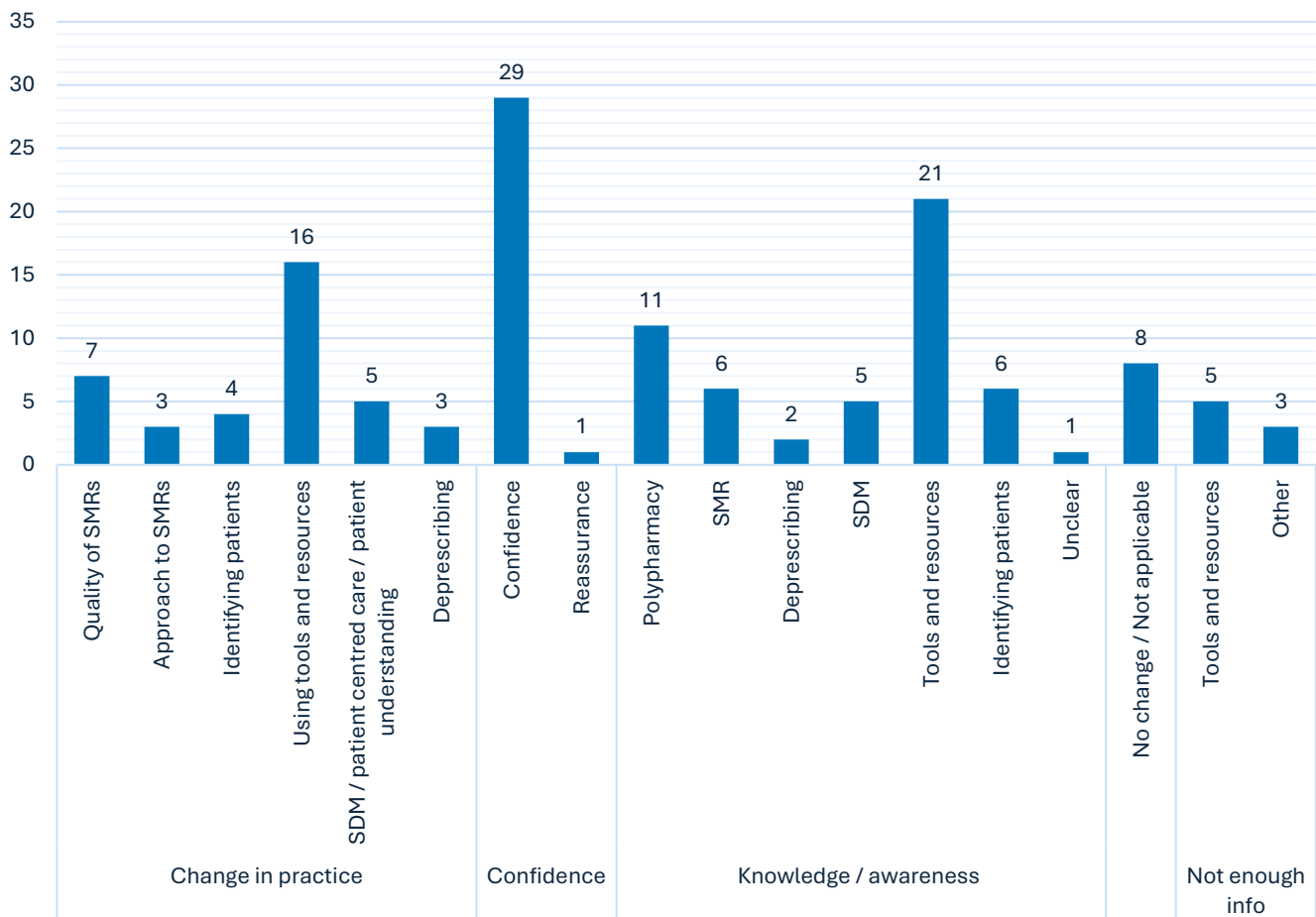### Ways in which the workshops have impacted practice

Figure 18 - How the workshops have impacted practice

The most frequently reported change in practice related to the adoption of tools and resources (n = 16). Respondents described incorporating tools introduced during the workshops to provide guidance, support patient searches, structure SMRs, and assist in clinical decision-making. Illustrative comments included:

> *"I have gained confidence in completing my SMRs using the useful resources discussed during the workshops."*

> *"I am using the different resources provided to help support SMRs for myself and my patients."*

> *"I have implemented use of several of the tools discussed in my review of complex/care home patients and SMRs generally."*

Other reported changes included improvements in the quality of SMRs (n = 7), with participants noting that their reviews had become "enhanced" or "more effective." Some described allocating additional time to ensure comprehensive discussions of each medicine with patients, while others developed new systems, such as creating dedicated time slots or designing new templates to standardise reviews. For example:

> *"Improved the way in which I carry out SMRs with patients on multiple medications."*

Four delegates described adopting new approaches to prioritising patients for SMRs, shifting away from chronological scheduling towards identifying patients with greater clinical needs, such as those living with frailty. A further five responses referenced improvements in shared decision-making and patient-centred care. Participants highlighted a more holistic approach to consultations, ensuring patients were informed, engaged, and empowered to contribute to decisions about their treatment. One participant explained:

> *"…I am making sure that the patient understands why they are taking the medications they are on, whether they are taking them as prescribed, what they have stopped and why, and whether they had a medication review or not."*

Three delegates reported being more proactive in relation to deprescribing, describing a deliberate and systematic approach to reviewing medication regimens and discontinuing inappropriate treatments.

In addition, 29 delegates referenced an increase in confidence, particularly regarding deprescribing and conducting SMRs. Several noted feeling reassured by hearing about shared challenges from colleagues during the workshops. Although confidence does not directly equate to practice change, it may positively influence both the quality and quantity of SMRs conducted. For example:

> *"It has impacted my practice by giving me more confidence to approach the discussion with patients about stopping medications and have successfully reduced ACB score for a couple of patients."*

"I'm more confident in managing polypharmacy reviews."

The largest thematic category related to increased knowledge and awareness. While not all responses directly described changes to practice, they highlighted the perceived value of this outcome. Areas of reported learning included polypharmacy (n = 11), deprescribing (n = 2), SMRs (n = 6), shared decision-making (n = 5), tools and resources (n = 21), and patient identification (n = 6). One respondent simply noted being "more aware of information," without further specification.

Eight respondents reported no change in practice, including two who explicitly indicated that the question was not applicable. A further nine responses could not be categorised due to a lack of detail, with comments such as "much improved" or "really useful resources" that did not provide elaboration.

Finally, respondents were asked: ***"Do you have any positive polypharmacy stories or case studies since attending the workshops?"*** More than half (n = 54; 51.9%) responded affirmatively, with 49 providing further detail (Figure 18).

Number of responses with and without a positive polypharmacy story or case study
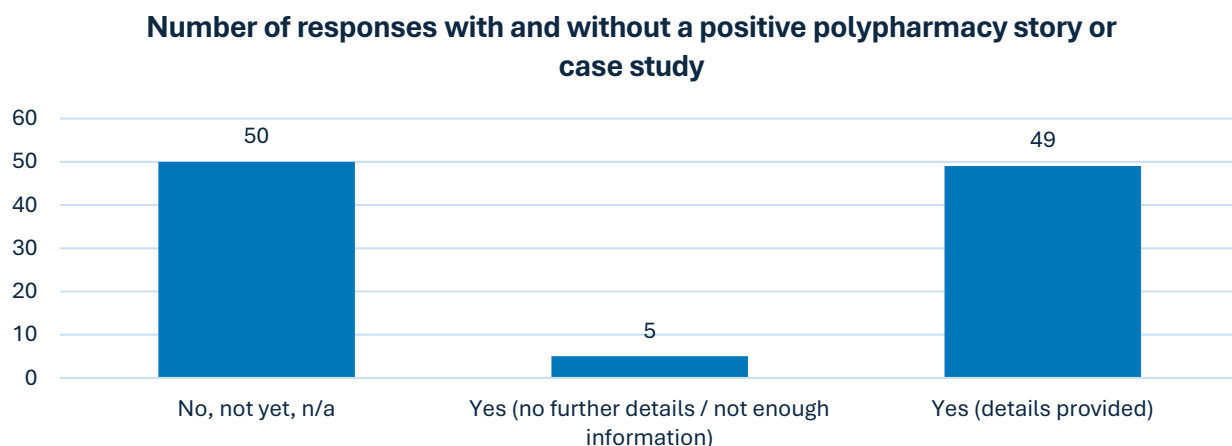

Figure 19 - Number of responses with and without a polypharmacy story or case study

Respondent narratives were categorised according to their dominant theme, with some accounts allocated to more than one category where appropriate (Table 9). Of the 49 responses that provided a positive polypharmacy story, the most prevalent theme concerned successful deprescribing or reduction of medicines. These cases often described not only the discontinuation of unnecessary treatments but also dose reductions or substitution with less potent alternatives. Such accounts illustrate that the workshops facilitated a shift from routine prescribing to more critical, patient-centred approaches to medicines optimisation.

Notably, over half of these responses (n = 19; 57.6%) provided detailed patient-specific examples, underscoring the tangible clinical impact of the interventions. For instance, one practitioner reflected: "I have a couple of elderly patients who had been prescribed a PPI in the

past but this had never been reviewed and on discussion, we agreed to reduce this down and see if they are able to manage without it." Another described aligning clinical action with patient preferences: "I have recently listened to a patient's desire to reduce their medication and have been able to bring that about with the agreement of the patient and the prescriber." These examples suggest that the workshops not only supported safe deprescribing practices but also promoted collaborative decision-making and responsiveness to patient goals. By contrast, the remaining accounts described more general outcomes, such as:

> *"Have done several medication reviews which resulted in deprescribing unnecessary medications."*

Although less detailed, these responses reinforce the overall trend of increased deprescribing activity following the workshops, suggesting that the training may have normalised deprescribing as a routine aspect of SMRs.

Within the 33 responses that referenced specific medicines, 22 identified the particular drug that was reduced or stopped (Table 10). The most frequently mentioned medicines were opioids and opioid-containing products, followed by gabapentin. The prominence of these medicines is significant, given their association with polypharmacy burden, dependency risk, and adverse outcomes in older adults. The pattern of reported deprescribing therefore suggests that participants were applying the principles of the workshops to high-risk medications, potentially yielding substantial clinical and safety benefits.

Types of positive stories and case studies	Count
Examples of medication reduction	33
Examples of improved approaches to SMRs / polypharmacy / SDM	8
Examples of patient outcomes	4
Examples of improved patient understanding	3
Examples of knowledge sharing (staff)	3
Examples of QI projects being developed	2
Examples of improved confidence	2

Table 9 - Types of positive stories and case studies given by respondents

Medication reduction	Count
Not specified	15
Amitriptyline	2
Gabapentin	4
Iron	1
Metformin	1
Naproxen	1
Non-benzodiazepines / Z drugs	1

Opioids / opioid containing medicines	5
Proton pump inhibitors	2
Pregabalin	2
SSRIs	2
Non specified analgesia	1

Table 10 - Types of drugs reduced or stopped

Eight responses described enhanced approaches to SMRs, polypharmacy management, or shared decision-making. These examples highlight how the workshops contributed not only to individual skill development but also to the refinement of systematic approaches to medicines optimisation.

A smaller group of responses (n = 3) highlighted improved patient understanding of medicines as a direct outcome of workshop learning. Examples included the systematic explanation of a patient's treatment regimen to ensure comprehension, the use of external evidence resources (e.g., GP Evidence) to support shared decision-making regarding bisphosphonate therapy, and the introduction of pre-consultation patient information leaflets to prepare individuals for SMRs. These accounts suggest an enhanced recognition of the role of health literacy and patient engagement in the success of polypharmacy management.

Knowledge mobilisation was also evident. Three respondents described sharing workshop resources, tools, and strategies with colleagues, thereby extending the reach of the intervention beyond individual attendees to wider teams and practices. This form of horizontal knowledge transfer is important for embedding practice change at scale and for fostering consistency in approaches to polypharmacy across settings.

Two responses explicitly referenced the role of the workshops in informing QI initiatives, indicating that participants were translating learning into structured, practice-wide interventions with potential for sustained impact.

Finally, four responses described direct positive impacts on patient outcomes. Reported benefits included improved symptom control, enhanced condition management, increased medication adherence, and greater patient empowerment. For instance, one respondent described how review and adjustment of medicines alleviated withdrawal symptoms, while another reported improved hypertension control and reduced missed doses following a review. Others emphasised the importance of aligning treatment with patient preferences, such as supporting a patient's wish to reduce medication burden. These examples illustrate the potential of SMRs not only to optimise prescribing but also to deliver meaningful improvements in patient well-being and self-management capacity.

7. Challenges

Employing Facilitators & Co-Facilitators

The establishment of the workshops required careful planning and coordination. Lead Trainers and Co-Facilitators, identified through the national train-the-trainer programme and drawn from colleagues in the West Midlands region.

The train-the-trainer initiative had been developed to enable delegates of the ALS to cascade their learning locally, thereby building capacity across institutions. While many of those trained were also engaged in front-line practice, which at times limited their availability. Efforts had to be made to co-ordinate and work flexibly around their professional commitments. This collaborative approach ensured that the workshops could be delivered effectively, despite the practical considerations involved in aligning schedules and resources.

Session Sizes

Ensuring appropriate delegate numbers presented a challenge in the delivery of the workshops. For the sessions to function as intended particularly given their interactive and collaborative design—a minimum of 20 participants was deemed necessary to generate sufficient discussion, peer learning, and engagement. As the final cohorts approached there was a challenge to achieve the minimum 20 participants. Furthermore, the project delivery team found that between 10-12 registrants would not attend – factoring in this dropout rate was also important.

Although the workshops were still delivered under these circumstances, reduced delegate numbers inevitably influenced the dynamics of the sessions and the overall learning experience. This limitation may also be viewed as interconnected with other challenges outlined below, such as scheduling constraints and competing professional commitments, both of which likely contributed to fluctuations in attendance.

Timing

A further challenge in the implementation of the workshops related to the time commitment required for participation. Each set consisted of three workshops, each lasting three hours, which necessitated delegates taking substantial time away from their routine clinical activities. For practitioners working in front-line services, this represented a significant barrier, as their availability was often constrained by pressing service demands and staffing pressures.

Consequently, participation required both personal and organisational commitment, with managers needing to balance the release of staff for training against the operational demands of service delivery. This arrangement between professional development and clinical responsibilities was particularly pronounced in settings where workforce shortages were already evident. As a result, scheduling the workshops and securing consistent attendance proved complex, highlighting the structural challenge of embedding training opportunities within strained health and care systems.

Extracting Case Studies from QI Projects

A key challenge that emerged following the workshops was encouraging delegates to translate their learning into the implementation of QI projects within their own practice settings. While the workshops provided participants with the necessary knowledge and frameworks, the transition from theory to practice was met with its own constraints.

The primary barrier was the competing demands of front-line clinical responsibilities. Healthcare professionals were often required to prioritise immediate service delivery, which limited the time and capacity available to initiate and sustain QI initiatives. This constraint frequently hindered the production of practice-based case studies, which had been anticipated as a core output of the programme. The collection of case studies was intended not only to consolidate participants' learning but also to serve as a valuable resource for sharing best practices and illustrating the impact of QI approaches across the sector. However, due to the limited implementation of projects, this objective could not be fully realised.

Furthermore, the development of QI projects requires reflective time, cross-team engagement, and often organisational support—all of which proved challenging within the realities of busy front-line environments. Consequently, while the workshops succeeded in raising awareness and enhancing knowledge of QI methodologies, the practical application at a local level, and the generation of case studies to evidence this, remained more limited than originally envisaged.

8. Recommendations

Facilitator and Co-Facilitator Engagement

Future programmes should consider opening the barriers to finding trainers to deliver the workshops. As previously highlighted, the lead trainers and co-facilitators had completed a Train-the-Trainer accreditation process following their participation in the national ALS thus enabling them to deliver local bespoke education sessions. Due to the commitment required to complete this process it meant that there was a limited number of polypharmacy educators available to assist with delivery.

Opening this up to lecturers at local schools of pharmacy or other credible relevant organisations may help with alleviating the challenge of covering workshops. Developing a wider pool of trained facilitators may also reduce dependency on individual trainers with competing front-line commitments. A clear downside to this would mean stepping away from the standards set by the ALS Train-the-Trainer programme, however it is an option to potentially explore if HIWM choose to run further cohorts.

Improving Delegate Attendance by Optimising Timings & Frequency

As highlighted above, increasing delegate attendance and commitment was challenging on some occasions. Some suggested changes to future sessions could include the following:

- Shorter 1-hour sessions held over lunch breaks – condensing and trimming some content that could even be absorbed via supplementary reading instead.
- Video recorded sessions – enabling delegates to catch up or even embrace the training virtually. However, this will forfeit the interactive element.
- Having a single full day workshop which covers the main elements of the vPW and also allows face to face networking to spread best practice. Some considerations would need to be accounted for such as cost of booking a training venue and availability of both trainers and delegates. However, a potential charging model could be investigated.
- Bespoke PCN or GP Federation training – Pitching the vPW to a cohort of clinicians from a specific PCN or GP Federation will allow buy in and full commitment. However, this will need careful scheduling to train delegates on a timetable that does not impact front line practice. This could also aid QI project development thanks to full organisational buy in and keenness to train the workforce and improve processes.

Use of real-world examples to facilitate better understanding of SDM

It is recommended that future workshops incorporate a stronger use of real-world examples to support understanding and application of SDM. Feedback showed that delegates would have preferred some form of real-life scenarios:

> *"Include case studies on patients to help show how best to structure medication deprescribing in real examples"*

> *"Adding more case study-oriented training to improve clinical decision making"*

> *"Would prefer of more clinical example on polypharmacy was explained"*

> *"Workshop which looks into case studies and examples"*

Based on the comments from the feedback form some practical case scenarios drawn from everyday practice can help contextualise theoretical principles, making the concept more relatable and actionable for participants. Embedding these examples within interactive discussions or role-play exercises would enable delegates to explore the complexities of SDM in realistic settings, thereby improving confidence and competence in applying these approaches within their own clinical practice.

9. Appendices

9.1 Local delivery Case Study Poster

Addressing Problematic Polypharmacy In the West Midlands
A Case Study showcasing Health Innovation West Midlands local delivery of the HIN National Polypharmacy Programme.

Background

The HIN Polypharmacy Programme supported local systems and primary care in identifying patients at risk of medication-related harm. It promoted shared decision-making to encourage meaningful conversations about medicines, helping clinicians and patients work together to align treatments with health goals and quality of life.

Health Innovation West Midlands effectively leveraged the National Polypharmacy Programme, tailoring local implementation around the established three-pillar strategy.

Local Strategy for the 3-Pillar Approach

01

Pillar 1: Population Health Management
Data from NHSBSA Polypharmacy Comparators was used to assess PCN risk and prioritise patients for structured medication reviews (SMRs).

Bespoke Data Packs for GP Practices
In collaboration with the East Midlands Analytics Service, the team created a West Midlands-wide dashboard covering all practices and PCNs across six ICBs. This enabled the publication of tailored data packs for each practice, highlighting 25 key data points. Example data types are listed below:

- **Average number of unique medicines per patient**
- **Multiple prescribing of anticoagulants and antiplatelet medicine**
- **Percentage of patients concurrently prescribed 5 or more analgesic medicines**
- **Percentage of patients prescribed 10,15, 20 or more unique medicines**

Each data pack broke down key indicators by patient age group, helping clinicians identify high-risk populations. Equivalent to running 25 ePACT2 searches, the packs saved time by eliminating the need for manual system queries. These packs supported Pillar 1 by pinpointing at-risk groups and were also covered in detail during virtual Polypharmacy Workshops under Pillar 2.

02

Pillar 2: Education & Training
Investing in clinical leaders—Polypharmacy Clinical Leads, expert Trainers, and local training—to upskill primary care in safely stopping unnecessary medicines.

Virtual Polypharmacy Workshops (Locally developed training)

From Sept 2023 to Mar 2025, 171 clinicians across 10 cohorts participated in HIWM-developed virtual workshops, led by Pharmacy Educators. Aimed at improving Structured Medication Reviews (SMRs), each cohort completed three 3-hour interactive sessions featuring group work, polls, and discussions.

Clinicians were also supported to develop optional Quality Improvement (QI) projects using provided tools and templates. The workshops focused on building confidence in safe deprescribing through practical guidance and peer learning. The session breakdown is as follows:

- **Session 1 -** Introduction to polypharmacy, identifying SMR patients, and using data to prioritise workload; begin creating a bespoke action plan.
- **Session 2 -** Explore challenges, barriers, safe deprescribing, and tools; start reflective CPD and access the polypharmacy toolkit.
- **Session 3 -** Learn effective medication reviews, use patient packs, and develop detailed Quality Improvement/Implementation plan.

All delegates were given a bespoke practice specific data-pack prior to session 1. The sessions taught how best this data pack can be used to identify patients in addition to allowing at most risk and then utilising the *'Resources to support patients having a Structured Medication Review'* package to invite and conduct SMRs. Additionally, the session explored the medicolegal advice, along with Scottish and Canadian deprescribing guidelines. Furthermore the use of risk-stratification software was also discussed to help aid decision making. **See stats below:**

Testimonials from the sessions:

"I am more confident in discussing deprescribing and doing it where as before I would have been tempted to avoid it." – **Pharmacist in Birmingham**

"I have found some of the resources and reference websites really useful. It was reassuring to see the time constraints and some other practical issues are shared by other colleagues too." – **Pharmacist in Worcester**

"Think more holistically about the patient during medication reviews and ensure they are empowered to ask any questions about their medicines/conditions." – **Pharmacist in Stoke-on-Trent**

Workshop has made me aware of the plethora of resources and networks available to support reviews of patients' medication, especially medications I am unfamiliar with. The workshops have also given me some ideas of how to identify patients who may benefit from a review of their medication within the context of a mental health team. I will be sharing these ideas with colleagues and managers. – **Pharmacist in Coventry**

10 Cohorts between 2023-25

171 Delegates across 6 ICB's

90 Hours of training delivered

90% Of respondents plan to use a least one of the materials from the NHS 'Prepping for a medication review' patient pack (Resources to support patients having a Structured Medication Review) and 62% plan to use two or more.

90% Of attendees reported improved knowledge, skills, and confidence in conducting SMRs and deprescribing. Over 90% felt able to reflect on personal challenges and identify learning needs, with medicolegal guidance easing concerns about deprescribing for over two-thirds.

91% Of delegates reported that the workshop increased their understanding of shared decision making. Resulting in more personalised care, improved patient engagement, and increased confidence in deprescribing decisions.

Figures gathered from an analysis report developed by the East Midlands Analytics Service with selected figures gathered from in-session and post session surveys.

West Midlands Polypharmacy Community of Practice (CoP)

The Health Innovation West Midlands Polypharmacy Community of Practice brought together healthcare professionals from primary care, secondary care, and academia to share best practices and drive change in thinking around deprescribing and medicines management.

HIWM ran 9 Community of Practice sessions from 2022 to 2025, with a mailing list of around 300 members. Held as 1-hour lunchtime events, the sessions featured guest speakers from clinical and academic backgrounds covering topics such as:

- Discussing Pill Burden and look at the results of a large-scale NIHR Research Project studying medication management in older people on polypharmacy living in their own homes.
- A Multidisciplinary Team Approach looking at how Pharmacists and Technicians can work together to tackle problematic polypharmacy.
- Consultation models and shared decision-making.

03

Pillar 3: Public Behaviour Change
Local testing and evaluation of initiatives to shift public perceptions of prescribing and encourage open conversations about medicine concerns and expectations.

As a part of the 3rd Pillar HIWM cascaded links to *the Resources to support patients having a Structured Medication Review*. These were received by stakeholders in a mailing list comprising of over 300 individuals. Furthermore the materials were extensively covered and promoted during the local training.

The local programme team also ran a separate piece of local work involving PCN's in deprived areas utilising the materials to improve their SMR service and communication with local communities around the harms of medicines mismanagement. A seperate case study is available for this piece of work, please contact the team for more information.

Health Innovation WEST MIDLANDS

Polypharmacy: getting the balance right

9.2 Links to further QI Project Case Studies

Additional West Midlands based case studies captured on the **Polypharmacy QI Posters site** operated by HIN Wessex

- Polypharmacy - a pharmacist-led medication review clinic (Solihull Rural PCN)

- Impact of DAMN drugs reviews in Dudley (Dudley ICB)

- Impact of an EMIS search to prioritise care home residents for a pharmacist-led medication review (Coventry and Warwickshire ICB)

- Methotrexate and renal impairment

- Catch me before I fall…

- Improving the care of patients receiving combined antiplatelet and warfarin therapy

- Embracing Digital Tools to ensure Optimal Care: Utilising MS Teams to deliver SMRs in Care Homes

- Evaluation of the deprescribing of anticholinergic medications in dementia patients (Dudley Integrated Health and Care NHS Trust)

- Reducing Anticholinergic Burden by conducting Structured Medication Reviews

9.3 virtual Polypharmacy Workshops - Feedback on all 3 sessions – Blank Form

Below is a blank copy of the Microsoft Form shared with delegates who had completed all 3 sessions

virtual Polypharmacy Workshops - Feedback on all 3 sessions

In order to receive a Certificate of Attendance please provide the following information:

1. First & Last Name *

2. Role *

3. Place of Work *

4. Which Cohort did you register for? *

Overall thoughts

5. The workshops improved my knowledge, skills and confidence in undertaking SMRs and deprescribing where appropriate? *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

6. Since attending the workshops how has it impacted your practice? How does this differ from before? *

Please provide details

7. Do you have any positive Polypharmacy stories or case studies since attending the workshops? *

  Do not use patient identifiable information

8. Which elements of the workshops are most helpful? *

  QI project 8 step plan

  Data driven risk stratification

  Practice level data pack

  Identifying challenges

  Understanding personal barriers

  Polypharmacy Tools and Resources

  Medicolegal information

  NICE guidance

  Strategic policy - e.g DES

  Local ICB priorities

  Expert Trainers

  Personal Polypharmacy Pledges

  Shared Decision Making principles

  SDM - Tools

  Patient materials pack

  Break out rooms

41

Polls + Other interactive elements

Homework

Supported CPD cycles

Networking

Protected time during workshop

Other

9. Do you have any feedback regarding the trainers?

Session 1

Aims: Using data to prioritise workload and make best use of time. Understanding the benefits of addressing Polypharmacy.

10. The workshops increased my understanding of data driven risk stratification to select which patients we should offer a SMR? *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

11. The workshops increased my understanding of how to identify patients at most risk of problematic Polypharmacy *

Strongly agree

Agree

Neutral

Disagree

Strongly disagree

12. Before the workshops we identified patients requiring a SMR by: *

13. After the workshops we identify patients requiring a SMR by *

Local data - Using the practice level data pack provided ePACT2

Polypharmacy Comparators

42

Local ICB incentive scheme

ICB Meds Op chosen Polypharmacy Comparator focus table - Session 1 slides

National strategy recommendations - E.g DES, NHS Medicines opportunities document, QOF

Eclipse Live

Medoptimise

Analyse Rx

Arden and Gem

Bespoke Search

Other

14. The workshops allowed me to understand the benefits of SMRs and why addressing problematic Polypharmacy should be a priority? *

Strongly Agree

Agree

Neutral

Disagree

Strongly disagree

15. Any other comments on session 1? Anything you would change?

Session 2

Aims: Why Polypharmacy is challenging and understanding personal barriers. Overview of Polypharmacy Tools. Medicolegal information.

16. The session allowed me to reflect on why addressing Polypharmacy is challenging and understand my own personal barriers and learning needs

Strongly Agree

Agree

Neutral

Disagree

43

Strongly disagree

17. Which of the Tools have you used since attending the virtual Polypharmacy Workshops?

STOPP / START

PrescQIPP - IMPACT tool

GP Evidence

Scotland Polypharmacy Toolkit - Website

Scotland Polypharmacy App

Medstopper

No Tears

Canadian Deprescribing Network

Australian Deprescribing Network

Other

18. Which of the above tools do you find most useful and why? *

19. The Medicolegal advice alleviated my concerns over stopping medication *

Strongly Agree

Agree

Neutral

Disagree

Strongly disagree

20. Any other comments on session 2?

Session 3

Aims: Shared Decision Making. Patient materials. Putting it all together.

21. The workshops increased my understanding of Shared Decision Making *
44

Strongly Agree

Agree

Neutral

Disagree

Strongly disagree

22. Which of the Tools and Frameworks have you used since attending the workshops? *

Polypharmacy - A patient centred approach - Lelly Oboh

7 Steps to appropriate Polypharmacy

5 Question Model

Three-Talk Model

Ask 3 Questions

Me and My Medicines Charter

BRAN

LICEF

RxISK

GP Evidence - Benefits and Harms

NNT - Number Needed to Treat

Decision Aids - Please state

Other

23. Which materials from the NHS "Preparing for a medication review" patient pack do you plan on using in practice? *

Select Multiple

Patient SMR invitation letter

Me and My Medicines communication charter

Stopping Medication Safely leaflet

45

Animation

Leaflets - Alternate languages

None

Other

24. If you intend to use the patient materials, how will you use them? *

Where do they fit into the patient journey

25. Any other comments on session 3? Anything you would change?

QI Project

Creating a Polypharmacy Action and Implementation plan with potential to do a QI project poster

26. The 8 step Polypharmacy QI project plan helped me create a Polypharmacy Action and Implementation plan with potential to write up into QI poster *

Strongly Agree

Agree

Neutral

Disagree

Strongly disagree

27. Do you plan on undertaking a Polypharmacy QI project at your practice? *

Yes

No

I would like to but need more support

28. Please tell us more about your intended Polypharmacy QI project.

29. Is there anything else we could do to support delegates with putting learning into practice and subsequent write up into QI project poster?

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Looking Ahead

30. I am interested in becoming a Polypharmacy Champion *

Yes

No

I need more information

31. Do you have any suggestions for us to improve future events?

32. Any final comments, questions or ideas?

33. How likely are you to recommend the virtual Polypharmacy Workshops to a colleague? *

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Acknowledgements