Patient, pharmacist, and GP perspectives on identifying and managing polypharmacy: a qualitative study

Jung Yin Tsang, Thomas Blakeman, Matthew Sperrin, Tomazo J Kallis, Rupert A Payne and Darren M Ashcroft

Abstract

Background

Polypharmacy is a global priority owing to potential harms, including adverse drug events, hospitalisations, and high treatment burden. Overall, these outcomes have shown little improvement despite numerous interventions, indicating that current approaches to identify and manage polypharmacy remain insufficient.

Aim

To understand how polypharmacy is identified and managed in everyday primary care from patient, pharmacist, and GP perspectives.

Design and setting

Qualitative semi-structured interviews were conducted with 12 patients and 12 professionals (seven clinical pharmacists and five GPs) across Greater Manchester, UK.

Method

Reflexive thematic analysis was undertaken, which was supported by normalisation process theory and constant comparison as sensitisation tools.

Results

Polypharmacy was widely seen as important work but, in practice, inconsistent case-finding and unclear purposes for polypharmacy medication reviews were reported. Patients viewed medications as essential tools to sustain biopsychosocial elements of life, contrasting with practitioners' clinical priorities to mitigate potential harm. Polypharmacy work routinely contained layers of hidden complexity, which was often overwhelming and placed a heavy emotional burden on patients and professionals. Both patients and professionals required training and experience to effectively manage these complexities. Although a protocol-driven approach was sufficient for simple medication issues, only a longer-term approach, predicated on trust, continuity, relationships, and open discussions encouraging healthy conflict, appeared to engage with deeper complexities.

Conclusion

Polypharmacy work is fraught with complexity and uncertainty, lacking standardised case-finding and clear purpose for both patients and professionals. Better models of care are needed to meet this challenge, encouraging a shift beyond a biomedically dominated protocol-driven approach to a more longitudinal and relational approach.

Keywords

general practice; polypharmacy; prescribing; primary health care; medication review; pharmacists.

Introduction

Polypharmacy is a global patient safety challenge that is broadly defined as the use of multiple medicines.[1] Its prevalence is rapidly rising, with more than one-third of people aged >65 years taking >5 regular medicines, and almost one-quarter taking ≥8.[2] Polypharmacy is often necessary in an ageing population with increasing prevalence of multiple long-term conditions (multimorbidity).[3] Yet, as the number of medicines prescribed increases, so does the risk of adverse drug events and resultant hospitalisations, increasing health service costs and decreasing quality of life.[4–6] Problematic polypharmacy has been defined as *'the prescribing of multiple medications inappropriately, or where the intended benefit of the medication is not realised.'*[7]

Polypharmacy interventions have been tested globally in hundreds of studies, but improvements in key health outcomes, such as quality of life, hospitalisations, and death, have not been found.[8,9] Amid the expansion of the clinical pharmacist workforce in primary care, NHS England recommended structured medication reviews (SMRs) in 2020 to tackle polypharmacy, inappropriate prescribing, and medication-related harm.[10] Yet early research on SMR implementation suggests limited impact, and the service is no longer explicitly incentivised.[11–13]

How this fits in

Despite international efforts, polypharmacy interventions have not demonstrated improvements in core patient outcomes, including hospitalisations or quality of life. Our participants widely viewed problematic polypharmacy as an area of important work, but, in practice, inconsistent case-finding and unclear purposes for polypharmacy medication reviews were reported. Routine polypharmacy work contained layers of complexity, which required experience for effective engagement. Better models of care are needed to support both patients and professionals in meeting the challenge of complex decision making, and to move beyond a biomedically dominated, protocol-driven approach.

There are clear gaps in both the identification and management of problematic polypharmacy.[14] Identifying those with excessive or inappropriate prescriptions is challenging as people with more health needs often require more medicines, meaning that simple counts of medicines do not distinguish appropriate from problematic polypharmacy.[15,16]

Current approaches to identify high-risk patient groups include targeting those receiving ≥5 medicines, the sickest patients (for example, frail older people), or those experiencing prescribing of specific drugs in particular clinical context.[14]

Such approaches do not take account of individual needs or appropriate indications for long-term conditions and can miss others at high risk of problematic polypharmacy.[7,17]

This wide scope for case-finding, defined as the active identification of patients who may have problematic medication regimens, implies that we have yet to identify the optimal population to target.

Managing polypharmacy is also very challenging, requiring alignment of patient priorities with shifting age-related pharmacology and the interactions of multiple medicines and conditions.[17,18] Added to these demands are also significant relational and emotional challenges that are routinely encountered with polypharmacy work, such as negotiating patient concerns, managing treatment burden, and navigating uncertainty around medication changes.[18–20]

Polypharmacy management and services, therefore, still fall short of policy ambitions to deliver medicines optimisation entailing a person-centred approach. The reasons for this remain unclear, with a gap in our understanding of how polypharmacy is approached in the real world.

Therefore, our aim was to understand how problematic polypharmacy is identified and managed in everyday practice from patient, pharmacist, and GP perspectives, in the context of managing multiple long-term conditions in primary care. In doing so, our objective was to highlight potential opportunities for improvement and to reveal aspects of daily work that need to be considered when implementing polypharmacy interventions.

Method

Methodology and theoretical underpinning

We adopted an exploratory-interpretive qualitative approach through a constructivist lens, drawing on reflexivity to support an interpretation of participants' accounts as contextually situated and co-constructed.[21]

Semi-structured interviews were used to generate rich, detailed accounts while allowing participants to describe experiences in their own terms. Normalisation process theory (NPT) was used as a sensitisation tool to increase depth of analysis.[22] NPT is a middle-range theory focused on implementation that provided a relevant framework to guide the examination of routine work across our interview schedule, topic guides, and analysis.[22] It was applied to explore the underlying processes underpinning care, within and across health and social networks, through which polypharmacy work had become taken for granted or normalised.

Participants and recruitment

We sought to recruit patients and professionals involved in managing problematic polypharmacy in primary care. We purposively sampled six GP practices across Greater Manchester identified through the National Institute for Health and Care Research Clinical Research Network (now known as the Research Delivery Network) to include a range of geography, socioeconomic deprivation, practice size, and staff mix. Two professionals and two patients were then purposively recruited from each practice, after potential participants fulfilling eligibility criteria (Box 1) and consent to contact forms were completed by each practice.

Patient recruitment met specified definitions for problematic polypharmacy (Box 1) and multimorbidity (≥2 long-term

JY Tsang (ORCID: 0000-0002-0331-2777), MRes, GP and NIHR doctoral research fellow, Centre for Primary Care and Health Services Research, School of Health Sciences, The University of Manchester, Manchester, UK; National Institute for Health and Care Research Patient Safety Research Collaboration Greater Manchester, The University of Manchester, Manchester, UK; Division of Informatics, Imaging and Data Sciences, School of Health Sciences, The University of Manchester, Manchester, UK. **T Blakeman** (ORCID: 0000-0003-3298-8423), PhD, professor of primary care, Centre for Primary Care and Health Services Research, School of Health Sciences, The University of Manchester, Manchester, UK; National Institute for Health and Care Research Patient Safety Research Collaboration Greater Manchester, The University of Manchester, Manchester, UK. **M Sperrin** (ORCID: 0000-0002-5351-9960), PhD, professor of biostatistics and health data science, National Institute for Health and Care Research Patient Safety Research Collaboration Greater Manchester, The University of Manchester, Manchester, UK; Division of Informatics, Imaging and Data Sciences, School of Health Sciences, The University of Manchester, Manchester, UK. **TJ Kallis** (ORCID: 0009-0005-1654-5464), PhD, senior clinical research fellow; **RA Payne** (ORCID: 0000-0002-5842-4645), PhD, professor of pharmacoepidemiology, Department of Health and Community Sciences, Faculty of Health and Life Sciences, University of Exeter Medical School, University of Exeter, Exeter, UK. **DM Ashcroft** (ORCID: 0000-0002-2958-915X), PhD, professor of primary care and clinical pharmacology, National Institute for Health and Care Research Patient Safety Research Collaboration Greater Manchester, The University of Manchester, Manchester, UK; Division of Pharmacy and Optometry, School of Health Sciences, The University of Manchester, Manchester, UK.

CORRESPONDENCE

Jung Yin Tsang
Centre for Primary Care and Health Services Research, 6th Floor Williamson building, Oxford Road, The University of Manchester, Manchester M13 9PL, UK.
Email: jungyin.tsang@manchester.ac.uk

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Box 1. Inclusion criteria for patient and professional participants

Participant type	Inclusion criteria
Patients	People with ≥2 long-term conditions who are taking ≥5 regular medicines (prescribed for continuous or repeated use) with: • multiple prescribing issues (for example, meets potentially inappropriate prescribing criteria and previous adverse drug reactions and/or side effects) • potential drug–drug interactions • difficulties taking their medicines (for example, adherence issues)
Professionals	GP or clinical pharmacist with identified organisational responsibilities for managing polypharmacy and multimorbidity at the practice

conditions), purposively sampling across age, sex, ethnicity, and multimorbidity.

For professional recruitment, practices were encouraged to identify staff who had organisational responsibilities in managing polypharmacy and multimorbidity. The professional sampling deliberately included both GPs and pharmacists to capture a wide range of perspectives from the core polypharmacy workforce, given the diversity of practice-based approaches and the evolving characteristics of primary care pharmacist roles. In keeping with a reflexive approach, we viewed thematic saturation in terms of whether the sample provided sufficient depth and breadth rather than as a fixed threshold.[23] With 24 interviews, we judged the dataset adequate to generate robust patterns across both participant groups.

Data collection

Semi-structured interviews were conducted remotely (either online or via telephone) by the first author (a male GP experienced in qualitative research) between April and December 2024. Topic guides and interview schedules were developed and tailored to professional and patient groups, informed flexibly by NPT, and structured around network processes, then refined through internal trialling by the research team (see Supplementary Boxes S1 and S2). To help ground professional interviews in specific rather than general experiences, practitioners were asked to perform case-note reviews on five recent patients with problematic polypharmacy. The design of a structured template to guide these case-note reviews was informed by the Scottish Government's polypharmacy guidance, which features the seven-steps medication review (see Supplementary Box S3).[24] These cases formed a more focused discussion during interviews in exploring aspects of identification, management, and challenges faced.

Analysis

With consent, interviews were digitally recorded, de-identified, and professionally transcribed verbatim. Data were imported into NVivo (version 12) to organise coding of the interview data using reflexive thematic analysis.

The first and second authors initially read and re-read the transcripts independently. Patient and practitioner transcripts were synthesised in parallel, building a set of accounts from each practice.[25] Given our reflexive stance, we did not use member verification, as it assumes data can be validated against a fixed truth.[25] Alongside fieldnotes for context, initial codes and subsequent themes were developed at weekly data sessions by the first and second authors. Themes began as broad, inductive patterns grounded in the interview transcripts and fieldnotes, then became more focused through constant comparisons across participants, practices, and settings.[26]

As analysis progressed, some themes were split, combined, or renamed to better capture the data, while NPT helped to sensitise interpretation, using a thematic map to organise related codes (under and across constructs of coherence, cognitive participation, collective action, and reflexive monitoring).[22,25] Consistent with the reflexive approach, coding and theme development were iterative and recursive, moving from descriptive observations towards more interpretive patterned meanings that evolved through discussion within the wider team at regular intervals.

Results

In total, 24 interviews were performed, including 12 patients and 12 professionals. Three patient interviews were conducted with interpreters and carers present, as requested by the participant. Interviews lasted an average of 36 minutes (ranging from 25–61 minutes). One professional participant withdrew after recruitment owing to time constraints and was replaced. The professionals included five GPs and seven clinical pharmacists, which covered practice-based pharmacists, locality-employed pharmacists working across several practices and pharmacists with advanced practitioner qualifications. Three of the seven clinical pharmacists interviewed were independent prescribers. Participant characteristics of the patients and professionals interviewed are shown in Table 1.

Our findings are presented as three main themes, which highlight the challenges of identifying and managing polypharmacy in everyday practice.

Importance, focus, and purpose

'A huge cohort are on multiple medications, and it's really important as part of the safety work … often it's about deciding what is the highest risk thing to address rather than what we're actually aiming to achieve.' (GP 10, female, 11–20 years' experience)

'I know I need them overall. It's everything together that keeps me going, really. I couldn't say what each one does on its own.' (Patient 6, male, 11–14 regular medications)

Overall, there was strong appreciation that polypharmacy was an important and beneficial area of work. Professionals noted the compound risks of iatrogenic harm, medication errors, and adherence issues with polypharmacy, adding to increased workload downstream. Patients described the benefits of receiving holistic care, balancing medicines management across diseases and specialties. Yet strategies to identify polypharmacy issues lacked focus and

Table 1. Participant characteristics

Characteristic	*n*
Patient participants (*N* = 12)	
Age group, years	
20–35	1
36–50	1
51–65	2
66–80	4
≥81	4
Sex	
Female	7
Male	5
Ethnicity	
Asian or Asian British, including Chinese	3
Black, Black British, Caribbean, or African	2
Mixed or multiple ethnic groups	1
White	6
Long-term conditions	
0–4	0
5–10	7
11–14	4
≥15	1
Regular medications (prescribed for continuous or repeated use)	
11–14	8
15–19	3
≥20	1
Professional participants (*N* = 12)	
Age group, years	
20–35	2
36–50	8
51–65	2
Sex	
Female	7
Male	5
Ethnicity	
Asian or Asian British, including Chinese	4
Black, Black British, Caribbean, or African	1
Mixed or multiple ethnic groups	2
White	5
Deprivation of main practice of work, decile	
1–2 (most deprived)	4
3–4	2
5–6	2
7–8	4
9–10 (least deprived)	0
Professional role	
GP	5
Clinical pharmacist	7
Professional experience, years	
0–5	1

...continued

were often framed as part of other areas of work, with some being broader (for example, frailty and care home populations) than others (for example, antidepressant reviews or annual reviews of cardiovascular disease or diabetes medications).

Many professionals noted that case-finding for polypharmacy medication reviews lacked standardisation and was mainly reactive (for example, patient medication queries, rejected repeat prescriptions, or after hospital discharge). Some attributed this to reactive management being simpler than proactive work, which required challenging the '*status quo*'. Even for those that purposively targeted polypharmacy, practitioners were unclear if existing case-finding strategies were helpful:

'I wasn't sure where to start, so we tried to review everyone taking over 10 medicines … but I don't think it made a difference at all.' (Pharmacist 6, male, 6–10 years' experience)

Inconsistent case-finding approaches also led to a lack of clarity in the purpose of polypharmacy medication reviews. For professionals, the purpose of these reviews ranged from practitioner-driven deprescribing conversations focused on medicines safety and improving adherence, to more patient-led goals, such as discussing possible side effects, developing relationships to support ongoing care, and coordinating tablets from specialists. For patients, perceived goals ranged from routine health reviews to education about individual medicines, or simply discussing their current circumstances and symptoms. Likewise, beyond recognising that polypharmacy medication reviews, particularly SMRs, should entail a more detailed review, practitioners felt these had little effect on practice. As such, several practitioners and patients reflected a sense of ambiguity and ambivalence on the purpose of polypharmacy medication reviews:

'It's quite boring conducting them. There's no level of intellect involved as such, unless you really do go in-depth, and start optimising.' (Pharmacist 7, female, ≥21 years' experience)

Table 1. continued.

Characteristic	*n*
6–10	3
11–20	5
≥21	3

'I have a regular, sort of, 12-monthly review and they let me know whether I need it or not … nothing has really changed.' (Patient 3, male, 15–19 regular medications)

Interplay of biopsychosocial factors and clinical complexity

'Sometimes the biology says one thing, but the reality of their life says another … that's where it becomes difficult, because the guideline doesn't tell you what to do when someone is frail, anxious, falling, and living alone.' (GP 12, male, 11–20 years' experience)

'I don't know which medicine is doing what anymore. I've got pain, anxiety, stomach problems. Everything's mixed up and you don't know what's causing what.' (Patient 8, female, ≥20 regular medications)

All patients reflected journeys of cumulative loss across the biopsychosocial spectrum and an inevitable accumulation of medicines that had led to polypharmacy. Management of their medicines was often disrupted owing to these losses. In general, health losses (for example, operations, heart attacks, and admissions) reinforced the need for medicines and improved adherence, whereas psychosocial losses (for example, losses in memory, independence, and social circles) often decreased adherence and the perceived value of medicines. Family and carers played a major role in medicines management, and loss of loved ones were often significant disrupters of medicines routines. Ultimately, medicines were seen as essential to maintain good health and function, to help get through the day, or simply just to feel normal:

'Before I used to say, no, I don't want to take any medication … But I've ended up having so many health issues now that I have to take it … If I don't take it, I get in such a bad state.' (Patient 8, female, ≥20 regular medications)

These cumulative losses were often encountered by professionals in polypharmacy reviews and were often overwhelming. Patients clearly recognised that medicines had their limitations, yet they searched for something to be done to ease their loss and burdens both physically and emotionally through a thorough review of their polypharmacy. This exacerbated clinical complexity and uncertainty, such as establishing whether biopsychosocial losses, non-specific symptoms, or borderline results were related to side effects. Other contributors to complexity included unclear indications of medicines, imprecise risk-benefit conversations, and ambiguous or even conflicting messages from different specialists. There was additional complexity in coordinating social support (for example, connecting with family, carers, or other community services) to enable sufficient capacity for patients to self-manage and be adherent with medicines:

'I think the complexity comes from the non-medical issues … they weren't taking the tablets in the first place so there's no objective medical evidence that you can go on.' (GP 10, female, 11–20 years' experience)

For patients, managing polypharmacy reached beyond dealing with medicines and preventing adverse drug events. In fact, they seldom attributed problems with their health to their medicines. Their main motivations were framed around a sense of self-worth and maintaining quality of life. In contrast, clinical priorities for professionals mainly focused on safety concerns, with the sheer number of medications contributing to side effects and adverse drug events. This resulted in a tension between dealing with medication safety issues versus delivering effective holistic care and, consequently, differing opinions as to which medicines to change:

'This lady probably wasn't taking most of her medicines, and this was the one medicine that she liked taking, and I was trying to take [it] *off her, you know?'* (Pharmacist 1, female, 6–10 years' experience)

In summary, multiple medicines were often seen by patients as an inevitable consequence of biopsychosocial losses. These losses disrupted medicines management and became visible during polypharmacy reviews, where differing patient and clinician priorities drove complexity and uncertainty. Navigating these tensions and managing complexity left many professionals feeling stretched and overwhelmed:

'She buys medicines that she hasn't got prescribed, she's on over the maximum amount of morphine. I'm concerned about her mental health, so I've been liaising with social services. So, to reduce her polypharmacy has been really difficult, and quite emotionally draining for both [the] *patient and me.'* (Pharmacist 2, female, ≥21 years' experience)

Differing management strategies according to experience

'When you're less experienced you stick much closer to guidelines. With time, you realise the guideline doesn't tell you what to do when patients don't fit neatly into it.' (GP 10, female, 11–20 years' experience)

'I didn't question anything at first. It's only after being on them for years and getting side effects that you start to realise you need to ask more questions.' (Patient8, female, ≥20 regular medications)

There was an underlying assumption that work to manage multiple medicines was an accepted everyday task. But even experienced patients and professionals found it challenging to deal with the complexity and resulting uncertainty of managing polypharmacy.

Professional approaches

Experienced professionals developed multiple approaches to provide greater confidence in dealing with complexity

and uncertainty when managing polypharmacy. These approaches can be broadly summarised into four categories (Figure 1), employed according to the perceived level of clinical complexity, including protocol-driven, prioritisation, multidisciplinary, and longitudinal approaches.

Protocol-driven approach

'If the guidance is not there, I would just take [the medications] *all off.'* (Pharmacist 7, female, ≥21 years' experience)

For simple medication queries, a protocol-driven approach was often the most efficient strategy. This mitigated uncertainty and reduced complexity by basing decisions on guidelines, safety issues, or legal requirements and allowed professionals to feel a sense of thoroughness by *'going through each tablet'* (Pharmacist 7, female, ≥21 years' experience) with a dominant biomedical lens. But in polypharmacy work, where complexity was routinely encountered, this approach appeared insufficient, resulting in a lack of exploration of deeper patient agendas and social factors. Avoidance of complexity and uncertainty was often owing to insufficient experience or resource limitations and resulted in superficial medicines management, including a focus on medicines deemed more straightforward to deprescribe (for example, vitamins or proton pump inhibitors).

Prioritisation approach

'Perhaps I should only focus on the chronic pain stuff rather than go, oh, God, this patient also needs an SMR because they're on 12 other medications ... but I take it upon myself needing to do that.' (Pharmacist 1, female, 6–10 years' experience)

For more complex work, pharmacists and less experienced GPs often deployed a prioritisation approach. This mostly involved trying to prioritise and fit in everything they felt confident with, but avoiding unclear issues (for example, non-specific symptoms and social capacity). This approach was often overwhelming owing to the degree of complexity being prioritised, with medication review goals remaining quite practitioner-led. Pharmacists were valued for their unique skillsets and increased time for polypharmacy work by both patients and GPs. However, their diverse roles and prior experiences, including working across hospital, community pharmacy, and inter-practice services, meant they felt comfortable with managing different areas, leading to differences in the extent to which polypharmacy issues were prioritised and addressed.

Multidisciplinary approach

'Within that context of what feels like a much more multidisciplinary decision and, you're basing the risks of that medication be it anaemia or, significant falls risk, previous complications, on making that decision.' (GP 12, male, 11–20 years' experience)

Individual experiences in multidisciplinary teams, both within (for example, GP–pharmacist discussions and practice team best-interest meetings) and beyond the general practice (for example, working with care homes or psychiatry meetings), appeared helpful in building confidence in complex decision making. Several pharmacists acknowledged that effective polypharmacy management required a shift in thinking, moving from a protocol-driven approach focused on safety (taught in earlier training) to a more holistic and shared decision-making approach where medicines appropriateness was *'less black and white'* (Pharmacist 2, female, ≥21 years' experience). GPs also reflected on shifting from a historically medicalised approach in earlier training to a more personalised approach later. Pharmacists also valued enhanced consultation skills to better manage risk and shared decision making, often learnt through observations and discussions with GPs.

Longitudinal approach

'If it's complex, I know what my limit is … to go better prepared, I just let it play out and see what happens … and make sure there's a follow-up.' (Pharmacist 6, male, 6–10 years' experience)

Although polypharmacy medication reviews were often perceived as a one-off or annual check-in, participants repeatedly expressed that a longitudinal approach was important for success. This approach demanded more time to manage complex symptoms, further understand risk, and determine appropriate timeframes for follow-up. This also allowed input from other sources of information, such as how symptoms unfolded, temporal responses to treatment, and blood tests, scans, and other investigations to support decision making. Relationships and building trust were seen as central to effective polypharmacy management and contributed to the effectiveness of longitudinal follow-up approaches. Both patients and professionals valued continuity and building better relationships through face-to-face contact. This gave professionals more confidence in complex decision making (for example, deprescribing, dealing with addictive medicines, and advance care planning), with patients feeling more open to change. In contrast, several pharmacists reflected the challenges of *'cold calling'* (Pharmacist 1, female, 6–10 years' experience) patients, reporting limited success in engaging patients with more challenging deprescribing decisions. However, maintaining continuity had high demands on the emotional labour of professionals and was not trivial in the context of high primary care demand and limited resources:

'I understand how we have been driven to a much less … a much faster approach, less continuity. Because when you give someone a hand, they take the arm.' (Pharmacist 6, male, 6–10 years' experience)

Patient approaches

Polypharmacy resulted in considerable work for patients. Patients and carers had to develop methods to request, collect, organise, and take medicines in a timely manner, in addition to blood monitoring, investigations, and appointments that required careful commitment. Owing to the complexity of health issues represented by their polypharmacy, patients also had to determine the best way to interact with health professionals and coordinate inputs from different specialists in a seemingly fragmented healthcare system. Their approaches can also be summarised into four main categories (Figure 1), including unquestioning acceptance, outward acceptance, proactive engagement, and 'healthy' confrontation.

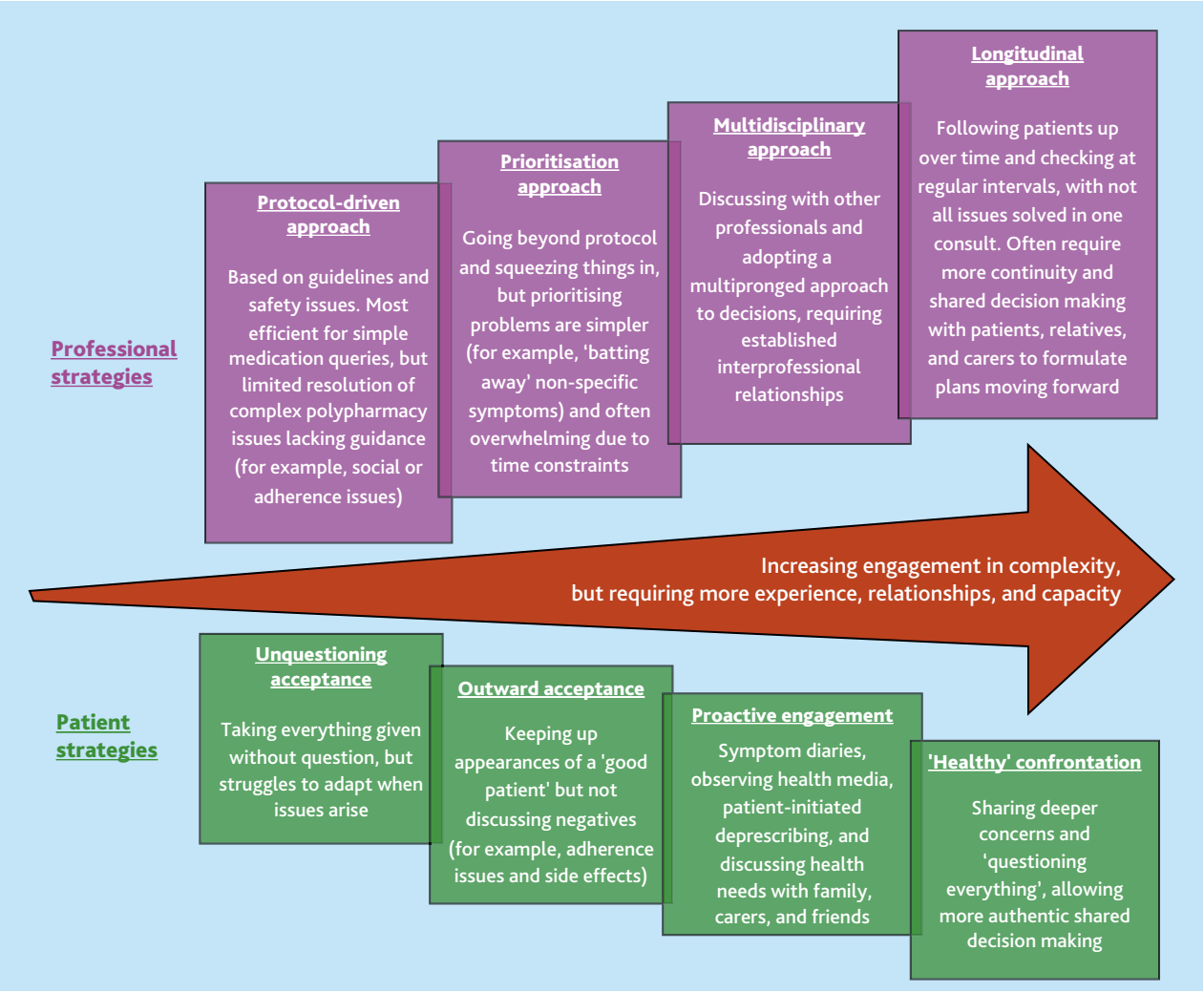

Figure 1. Patient and professional strategies to deal with complexity and resulting uncertainty in polypharmacy management. Categories are not intended to be discrete strategies, but rather to reflect a spectrum of approaches, with individuals being able to deploy different approaches to suit various issues. Professional capacity encompasses emotional labour, training, and physical resource (for example, time, room space, and technology), underpinned by interprofessional relationships and organisational support. Patient capacity encompasses health literacy, physical resource (for example, time, finances, and transport), mental wellbeing, and cognitive ability, often supported by family, carers, and social networks.

Unquestioning acceptance

'I take what's given to me.' (Patient 11, female, 11–14 regular medications)

Although patients expressed a general dislike of taking tablets, many trusted their health professionals completely to manage their health needs. Initially, many patients adopted a posture of unquestioned acceptance, willing to give anything offered as a trial. Cultural elements and a paternalistic professional–patient relationship also contributed to this willingness.

Outward acceptance

'He probably wouldn't mention it to the GP that he hasn't taken them. So, when his [diabetic level] *has gone up he'll say right, I'll cut back on the sweet stuff that I'm having.'* (Carer for Patient 9, male, 11–15 regular medications)

Inevitably, patients developed side effects, adherence issues, and shortcomings with health care. However, without severe symptoms or proactive follow-up, these issues were often not disclosed. In these scenarios, patients resorted to making their own health decisions, expressing outward acceptance, but choosing not to share negative information that could disrupt the patient–professional relationship.

Proactive engagement

'I spoke to my GP and I told her, I want to get off it because the weight gain and the other issues as well.' (Patient 8, female, ≥20 regular medications)

Over time, patients expressed a gradual acceptance of the necessity of medications, despite a constant desire to reduce medication burden. They also developed better self-management skills alongside a greater awareness of the need to actively engage with their health issues as part of normal life. This included symptom diaries, seeking health media, and discussing with family and carers where available. This enabled patients to proactively bring health issues to healthcare professionals, including patient-initiated deprescribing. Different types of medication adjustments (for example, increasing, reducing, stopping, and switching) required different levels of confidence, with more experienced patients and carers often choosing to

initiate changes involving professional support.

'Healthy' confrontation

'I've learned to question. If I'm not happy, ask.' (Patient 2, male, 11–14 regular medications)

Patients placed great value in healthcare staff that they had built trust with, allowing them to uncover hidden concerns and enabling healthy conflict, which allowed reconciliation of differing patient and professional agendas. Crucially, experience and capacity were needed to develop a voice to know when to speak up and have healthy confrontation with professionals. This enabled a more open discussion and potential for greater participatory decision making.

Discussion

Summary

Managing polypharmacy was widely seen as important work, but in practice inconsistent case-finding and unclear purposes for polypharmacy medication reviews were reported. Patients viewed medications as essential tools to sustain biopsychosocial wellbeing, contrasting practitioners' priorities to reduce medication-related harms. As a result, polypharmacy medication reviews often revealed layers of hidden complexity, contributing to professionals feeling overwhelmed and being burdened with emotional labour. Although this was assumed to be routine medicines work, both patients and professionals required experience to effectively manage the complexities of problematic polypharmacy.

Polypharmacy medication reviews resulted in a lot of uncertainty requiring complex decision making, including unclear risk–benefit conversations, non-specific symptoms and results, diverse psychosocial needs, and conflicting messages from specialists. Although a protocol-driven approach was most efficient for simple medication queries, a longitudinal approach, predicated on trust and building relationships over time, appeared to deal with deeper complexities within polypharmacy work. Similarly, patients who adopted an unquestioning acceptance approach had concise consultations, but only established relationships, trust, and experiences of consulting with healthcare staff allowed for healthy confrontation and agendas to be discussed in greater depth.

Strengths and limitations

Our sampling strategy allowed for the analytic comparison between patients, pharmacists, and GPs to strengthen our findings, especially given the importance of shared decision making in polypharmacy. Our approach to purposive sampling captured a diverse representation of primary care contexts and pharmacist roles. However, as our sample came from a single geographic region in the UK, the transferability of our findings may be limited. Recruiting patients occurred at practice level, which may have resulted in a sample with better engagement and positive relationships with healthcare teams. Our professional participants included a range of experience and may have represented those in more stable roles, but their accounts nevertheless illuminated a variety of challenges and approaches to managing polypharmacy. We purposively recruited a mix of GPs and pharmacists, recognising this may have reduced role-specific sample size and saturation, while still providing sufficient depth to explore those most directly involved in polypharmacy management.

Comparison with existing literature

There is mounting research suggesting that the complexity and uncertainty in managing polypharmacy and multimorbidity remains unrecognised.[20,27–29] This complexity often results in maintaining the 'status quo' described by Sinnott *et al*,[30] and this complements our findings that patient preferences for stability can align with clinicians' focus on risk avoidance, limiting meaningful medicines optimisation. In contrast, evidence suggests that >80% of patients would be willing to deprescribe if a trusted professional raised the issue, with clear tapering advice and follow-up support.[31,32] This relational and longitudinal approach may reduce uncertainty in decisions, simplify complexity, and ease emotional attachments to long-term medications.[33–36] This is also consistent with wider critique on multimorbidity care and patient safety policy, which emphasise patient empowerment and strategic resourcing to enable a more biopsychosocial approach grounded in relational continuity, which is attentive to people's wider social and emotional vulnerabilities.[37,38]

Implications for practice

There is a current failure to meet the challenge of complex decision making in polypharmacy. Real-world case-finding of problematic polypharmacy appears inconsistent and requires clearer focus to give patients and professionals a more defined and shared purpose for this work.

For lower complexity work, a direct protocol-driven or prioritisation approach might be sufficient, as demonstrated by previous trials with targeted medication safety indicators, including PINCER (Pharmacist-led Information Technology Intervention for Medication Errors) and DQIP (Data-driven Quality Improvement in Primary Care) trials, where the higher and clearer risk of adverse reactions makes professional-led priorities more appropriate.[39,40] But for many with polypharmacy, the protocol-driven and prioritisation approaches are insufficient, demonstrated by lack of impact of many multifaceted interventions.[8,9] Annual or 'one-off' medication reviews are also simply ineffective in managing these levels of complexity.[27]

Models of care to support both patients and professionals in managing complexity should recognise the experience and training that is required and resource the longitudinal requirements for this work. This may include supporting health literacy, improving deprescribing guidance, and establishing continuity as key enablers.[20,27,28] There may be a benefit to stratifying by complexity, choosing the optimal cases for protocol-driven versus longitudinal approaches, inexperienced versus experienced practitioners, and for simple medication reviews versus complete geriatric assessments by specialists.[41,42] This may match the appropriate practitioner (for example, pharmacists for clinical safety and GPs for psychosocial complexity) to the needs of patients and also allocate the required resources to match the cognitive load and emotional labour in managing complexity and continuity.

There remains a gap between patient and practitioner approaches to the evaluation of the value of medicines.[13,20,27] Ethnographic work suggests that this may reflect misunderstandings in medication reviews and a mismatch between patients' existential framings of distress and practitioners' predominantly biomedical responses. Although proactively incorporating patient priorities and pre-consultation tools have been studied, several multifaceted interventions incorporating them have shown limited impact.[43–47] Simply operationalising priority setting may therefore be insufficient to improve outcomes, but what is needed is improved relational continuity and closer clinician–patient relationships, built over time.

More broadly, closing this gap also requires systemic, social, and educational changes to counter the belief that every symptom or hardship in life has a drug-based solution.[48,49] This may involve national initiatives that acknowledge the limits of modern medicine, the risks of overmedicalisation, and the influence of the pharmaceutical industry driving the mismatch between biomedically dominated approaches to address biopsychosocial health.[50]

In conclusion, in practice, polypharmacy work is wrought with complexity and uncertainty, lacking standardised case-finding, with unclear purposes for patients and professionals. Models of care to achieve person-centred medicines optimisation requires more consideration and support for the complex decisions involved in polypharmacy. These should account for the concurrent needs of patients with complex lives, a developing pharmacist workforce, and resource-constrained GPs. This may allow a shift beyond a biomedically dominated protocol-driven approach to a more longitudinal and relational approach.

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This study was approved by the Greater Manchester East Research Ethics Committee (reference number: 23/NW/0290) and the Health Research Authority.

Provenance

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Competing interests

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