

## The impact of a pharmacist review of patients with enduring mental health needs – an evaluation of consultant psychiatrist opinions

**Andrew Walker**, *Lead Clinical Pharmacist Adult Mental Health, Leverndale Hospital, Glasgow, NHS Greater Glasgow & Clyde*

Correspondence to: [andrew.walker2@ggc.scot.nhs.uk](mailto:andrew.walker2@ggc.scot.nhs.uk)

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### Abstract

#### *Title*

The impact of a pharmacist review of patients with enduring mental health needs – an evaluation of consultant psychiatrist opinions.

#### *Author*

Walker A.

#### *Introduction*

A retrospective service evaluation of mental health pharmacy medication history reviews was undertaken. The characteristics from each review were analysed and consultant psychiatrist opinions of the value of these reviews were sought.

#### *Methods*

Data from 108 reviews was analysed and the opinions of 53 consultant psychiatrists were sought.

#### *Results*

The results demonstrated that reviews were undertaken primarily for people with complex needs who had been under the care of mental health services for an average of 22.3 years. Consultant psychiatrists overall found the reviews a valuable aid and contribution to care. The results of this evaluation will be used to develop standards and formal processes to better support future reviews.

#### *Conclusion*

The review has confirmed the value of the medication history review service to the consultant psychiatrists who requested the service and has identified how it can be further improved.

**Keywords:** psychiatrists, medication, review, opinion, mental health

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### Introduction

Mental Health Clinical Pharmacy Services in NHS Greater Glasgow & Clyde (NHS GG&C) provide pharmaceutical care to complex patients within mental health and associated services across the health board. NHS GG&C is the largest health board in Scotland and serves a population of 1.2 million. There are 1,159 inpatient beds and a wide network of community mental health teams. The Mental Health Clinical Pharmacy service is based across multiple inpatient locations and has a team of 23 pharmacists. Primarily an inpatient service, care is provided to a variety of specialties including adult mental health, child and adolescent mental health, forensic mental health, learning disabilities and older adult mental health services.

One element of the pharmaceutical care delivered is the provision of detailed medication history reviews. These involve

reviewing the entire mental health history of the patient, focussing on their drug treatment in terms of adherence, response and adverse effects. The main aim of these reviews is to recommend options for future treatment of the patient's mental illness. However, the reviews also consider any impact previous treatments have had on the patient's physical health and any impact their current physical health may have on potential future treatment options. A concise chronological summary is written outlining these elements and then recommendations are made for options for future treatment. Recommendations made are patient specific and reviews are frequently undertaken when evidence-based prescribing has failed. Undertaking this work is time-consuming and, within our service, had never been properly evaluated. This service is not provided to all patients but rather to those identified as a priority within the multidisciplinary team. Anecdotal feedback from multidisciplinary teams suggests these reviews are valued and contribute positively to patient care.

The National Scottish Government Mental Health Strategy<sup>1</sup> and Pharmaceutical Care Strategy,<sup>2</sup> which places a strong focus on patient-centred care and the management of long term conditions, consequently provide strong support for clinical interventions such as the medication history reviews that are undertaken.

Systematic searches of Ovid Medline and Embase using the search terms medication review, psychiatric, mental health, pharmacist and pharmacy failed to find any reported studies or literature on the value of medication history reviews.

In order to properly assess consultant psychiatrist opinion of the value of these reviews, a retrospective service evaluation was undertaken to determine the characteristics of the patients for whom reviews are provided and the opinions of the consultant psychiatrists who request them as to their value. It was hoped that this would demonstrate their positive impact on patient care and lead to improvements in the processes for requesting and undertaking reviews.

## Method

There were two elements to the service evaluation that were undertaken. Firstly, a retrospective data collection involving all pharmacists within the team (n=16) who had undertaken a medication history review during the period January 1st 2013 – May 31st 2014 was performed. The following data were collected: age, Common Health Index (CHI number - the unique 10 digit Scottish NHS patient identifier), consultant, pharmacist, date of review, sex, diagnosis, number of years in contact with mental health service and psychotropic medication at the time of the review.

These parameters were entered into a Microsoft Excel spreadsheet and analysed using standard Excel functionality.

Secondly, a survey questionnaire was developed and sent to the consultants (n = 53) who had requested the review. This asked the following questions:

1. What are the circumstances that would prompt you to request a review?
2. When you have asked for a review to be undertaken, has it been completed in the anticipated timescale?
3. Do you think that the format of the review is useful?
4. What did you like or dislike about the format of the review?
5. Do you think that the historic list of medicines is a helpful part of the review?

6. Why was the historic list of medicines helpful or unhelpful?
7. Were the recommendations within the review helpful?
8. Why were the recommendations helpful or unhelpful?
9. Did the review tell you anything new?
10. What new information did you get from the review?
11. Did you act on the recommendations in the review?
12. If you did not act on some or all of the recommendations, what influenced your decision?
13. In general terms, what are the main benefits of these reviews to patient care?
14. Do you file these reviews in the patient's case record?
15. Why do you not file these reviews in the patient's case record?
16. Based on previous experience, would you request another review?
17. What factors would influence your choice to request or not request further pharmacy medication history reviews in the future?
18. If you have any suggestions about how to improve the specialist pharmacy medication history reviews please tell us here.

Questions 1 and 13 offered options to select and free text. Questions 4, 6, 8, 10, 12, 15, 17 and 18 were free text.

The questionnaire was developed using SurveyMonkey and analysed using its standard tools and thematic review of the free text responses.

## Results

### 1. Patient Characteristics

Data was collected from 108 medication history reviews undertaken during the study period. These were performed by 16 specialist pharmacists at the request of 53 consultant psychiatrists. The patient characteristics are summarised in Table 1 (demographics), Table 2 (diagnosis) and Table 3 (psychotropic drugs prescribed at the time of the review).

A total of 95 (88%) of the 108 patients were prescribed an antipsychotic. Olanzapine was the most commonly prescribed (n=28) and 10 patients were receiving clozapine. 20 patients (21%) were prescribed two antipsychotics concurrently and one patient was prescribed three antipsychotics (clozapine,

Characteristic	Male	Female	Overall
Sex	55	53	n/a
Age range (years)	17 - 78	26 - 86	17 - 86
Average age (years)	47.5	53.4	50.4
Number of years in contact with services range (years)	2 - 56	2 -49	2 -56
Average number of years in contact with services (years)	21.1	24.0	22.3

**Table 1: Demographics**

Diagnosis	Male	Female	Overall
Agitated Depression	0	1	1
Alzheimer's	3	2	5
Autistic Spectrum Disorder	1	0	1
Asperger's and Obsessive Compulsive Disorder	1	0	1
Atypical Depression/Bipolar	0	1	1
Bipolar Affective Disorder	4	15	19
Borderline Personality Disorder	0	1	1
Delusional disorder	1	0	1
Depression	1	5	6
Emotionally Unstable Personality Disorder (EUPD)	0	1	1
Mixed Affective Disorder	1	0	1
Multiple System Atrophy	1	0	1
Obsessive Compulsive Disorder	0	1	1
Paranoid Psychosis	0	1	1
Paranoid Schizophrenia	6	4	10
Psychosis and Depression	0	1	1
Psychosis with Hypomanic episodes	1	0	1
Recurrent Depression	0	4	4
Schizo-affective Disorder	6	6	12
Schizophrenia	15	7	22
Schizophrenia and Asperger's	1	0	1
Schizophrenia and EUPD	1	0	1
Schizophrenia, OCD and Tourettes	1	0	1
Schizophrenia, Alcohol Abuse and Cognitive Impairment	1	0	1
Treatment Resistant Schizophrenia	6	2	8
Unclear (challenging behaviour)	3	1	4
Vascular Dementia	1	0	1
<b>Total</b>	<b>55</b>	<b>53</b>	<b>108</b>

**Table 2: Diagnosis**

Drug Class	Number of patients	Percentage of patients
Antipsychotic	95	88%
Antidepressant	48	44%
Mood stabiliser/anticonvulsant	45	42%
Anxiolytics and hypnotics	44	41%

**Table 3: Psychotropic drugs prescribed at the time of review**

amisulpride and haloperidol). As the data collection did not capture dose information it was impossible to identify any patients on high dose antipsychotic therapy.

11 patients were prescribed more than one mood stabiliser/anticonvulsant and there were no noted diagnoses of epilepsy.

5 patients were prescribed more than one antidepressant.

## 2. Questionnaire results

The questionnaire was issued to the 53 consultant psychiatrists identified. 25 responded to the survey (47.2%). Of those who did not respond, 4 had left NHS GG&C and were not contacted for a response.

The circumstances that would prompt a request for a review are shown on Chart 1.

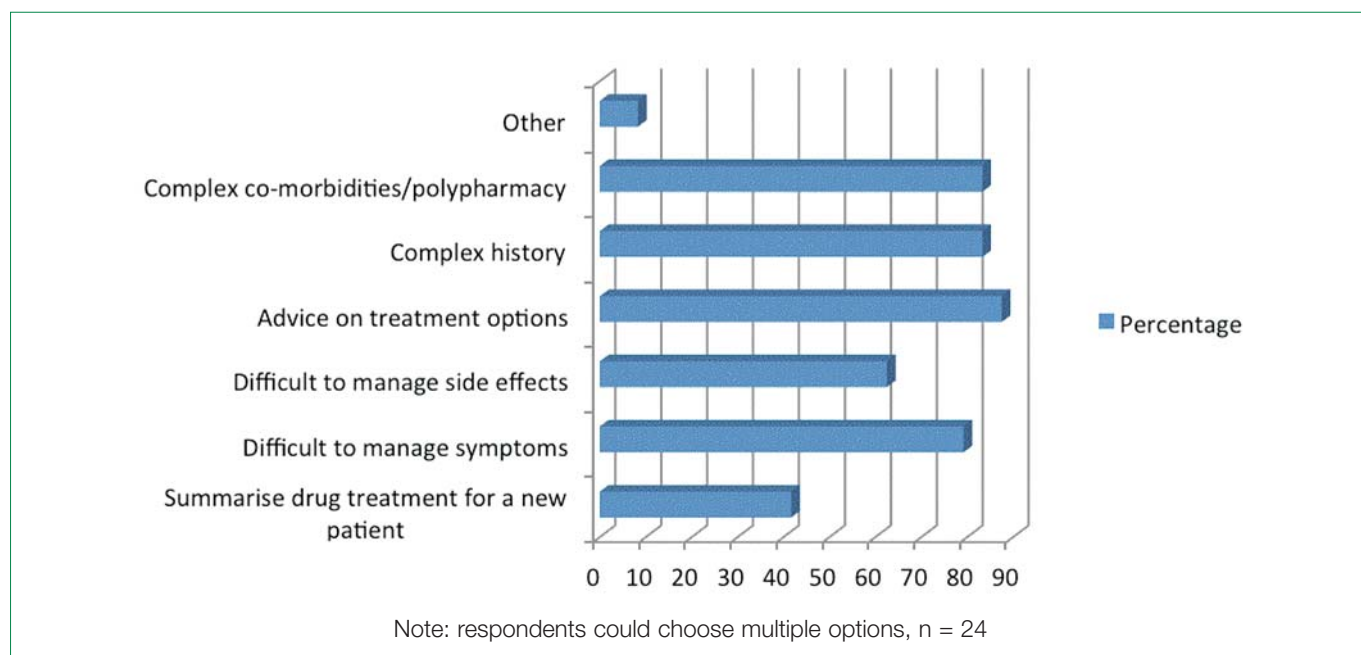
The free text responses to this question indicated that reviews were requested for patients with ‘complicated’ or ‘complex’ case histories or to identify alternative ‘treatment options’.

A summary of answers to specific questions (i.e. 2, 3, 5, 7, 9, 11, 14, 16) is shown in Table 4.

The themes that emerged from the free text questions (4, 6, 8, 10, 12, 15, 17) are shown in Table 5.

The main benefits to patient care that were perceived for the reviews are summarised in Chart 2.

The free text themes from the responses to ‘Other’ were ‘reflecting on care’, ‘making future recommendations’, ‘objective assessment of treatment plan’, ‘detailed overview of patient history and factors’.



**Chart 1: Circumstances that would prompt a request for a review?**

Question	Yes	Yes, sometimes	No	Can't remember
When you asked for review to be undertaken, has it been completed in the anticipated timescale?	95.8%	n/a	0	4.2%
Do you think that the format of the review is useful?	100%	n/a	0	0
Do you think that the historic list of medicines is a helpful part of the review?	100%	n/a	0	0
Were the recommendations within the review helpful?	100%	n/a	0	0
Did the review tell you anything new?	79.2%	n/a	8.3%	12.5%
Did you act on the recommendations in the review?	12.5%	87.5%	0	0
Do you file these reviews in the patient's case record?	91.3%	n/a	8.7%	0
Based on previous experience, would you request another review?	100%	n/a	0	0

**Table 4: Summary of answers to specific questions**

The suggestions made to the question about how to improve the specialist pharmacy medication history reviews were: 'timeframe', 'speeded up', 'quicker', 'standard format', 'evidence base'.

There were a number of specific quotes that emerged throughout the responses that illustrate the overall value of these reviews to clinicians and patients:

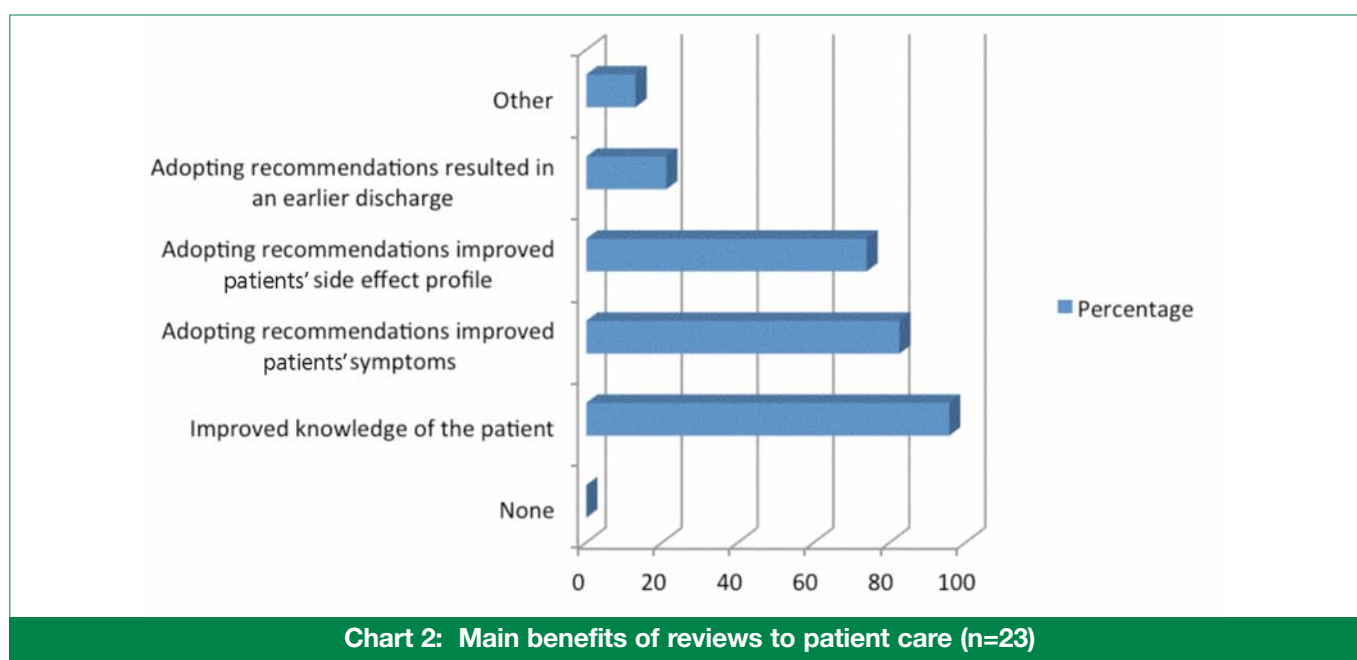
- 'useful to show relatives'
- 'useful to forward to Designated Medical Practitioners for assessment for T3 certificates'
- 'helpful document to refer back to when required'
- 'another professional's opinion'
- 'useful for explaining to the patient the rationale behind

medication changes'

- 'sometimes you assume a certain treatment was used at some point but this is not always the case'
- 'usually you know the patient well enough to foresee that a certain recommendation probably won't work-applying clinical judgement versus formulaic approaches'
- 'named pharmacist with knowledge of patients'
- 'pharmacy input invaluable'
- 'medication reviews are an important information resource when dealing with complex cases'
- 'good to discuss with pharmacist'
- 'co-morbidities'.

What did you like or dislike about the format of the review?	'Information', 'informing', 'informative', 'summary', 'summarise', 'comprehensive', 'chronological', 'logical', 'inclusive', 'thorough', 'helpful', 'concise'
Why was the historic list of medicines helpful or unhelpful?	'helpful', 'useful', 'inform', 'previous', 'previously used treatments', 'summary'
Why were the recommendations helpful or unhelpful?	'informed', 'inform', 'evidence', 'evidence base', 'future treatment options', 'robust', 'reasoning', 'thoughtful'
What new information did you get from review?	'options', 'recommendations', 'suggestions', 'summary of all the treatment', 'detailed list', 'past treatments', 'overview of treatments', 'interactions', 'side effects', 'detailed'
If you did not act on some or all of the recommendations, what influenced your decision?	'patient preference', factors, choice, issues, presentation
Why do you not file these reviews in the patient's case record?	'read them off ward did not think to file them', 'kept with pharmacist'
What factors would influence your choice to request or not request further pharmacy medication history reviews in the future?	'complex', 'complicated' cases, history, 'complexity', 'pharmacist shortages', 'pharmacy input', 'time', 'useful'

**Table 5: Themes from free text questions**



**Chart 2: Main benefits of reviews to patient care (n=23)**

## Discussion

The purpose of this evaluation was to assess consultant psychiatrists' opinions of the value of mental health pharmacy medication history reviews and to identify areas of improvement for the current process in NHS GG&C. This was achieved by characterising the patients for whom reviews are undertaken and, secondly, by seeking the views of consultant psychiatrists as to their value. The 17 month study period was chosen to give a reasonable number of reviews to allow meaningful conclusions to be drawn. The dataset collected is reasonably comprehensive but does have some limitations. The parameters chosen were those that could be easily extracted from the records held by the clinical pharmacists. With hindsight, four additional parameters could also have been requested:

- Time taken to complete the review. However, this is not currently recorded for all reviews.
- The number of sets of case notes for each patient. Again, not currently recorded. The length of time in contact with services is a proxy for this measure as it is reasonable to assume the longer the contact the greater the number of sets of case notes.
- Recommendations made in each review.
- Medication doses.

The data collected suggests an even split in terms of sex with regards to the reviews requested. The wide range of diagnoses reported reflects the range of mental health sub-specialties that receive input from our specialist mental health pharmacy service. The minimum time in contact with services of two years suggests the multidisciplinary teams reserve requesting these reviews for patients who are well-established within services. Indeed, the average number of years in contact being 22.3 years suggests these reviews are reserved for patients with a long and potentially complex history.

The range of diagnoses reported illustrates the severe and enduring nature of the mental health conditions experienced by the patients receiving reviews. Failure to request ICD10 diagnosis may have contributed to the variety of diagnoses recorded. The fact that the majority have a diagnosis with a psychotic component is unsurprising.

Likewise, the range of psychotropic drugs prescribed at the time of the review reflects the treatment options used in patients with a severe and enduring mental illness. More than 20% of patients were prescribed antipsychotic polypharmacy and this may be worthy of further investigation. It would be interesting to know if the review recommendations resulted in rationalisation to treatment with a single antipsychotic.

Overall, the responses to the questionnaire indicate that the consultant psychiatrists consider that these reviews have value and are a useful aid to patient care. There are clear limitations to the use of retrospective surveys. The responses in part rely on the participant's memory of historic reviews. This is a weakness and leads to generalisation. The responses to the question about the circumstances that would prompt a request for a review confirm that, on most occasions, reviews are undertaken for complex difficult to treat patients where the

consultant is looking for treatment options that either have not been tried or perhaps were not maximised previously. The majority of responders indicate that reviews were received within the anticipated timescale. It should be noted that, as a service, we do not specify a timescale for completing a review mainly because that is unpredictable and will vary depending on the complexity of the case and the time available to undertake the review.

The finding that 100% of responders found the review format, historic list of questions and the recommendations helpful suggests these elements of the current process are working well (Table 4). The free text responses to the associated qualifying questions illustrate this further (Table 5). The emphasis given to words like 'informative', 'comprehensive', 'logical', 'concise', 'helpful', 'robust', 'evidence base' and 'treatment' suggest the format and content of these reviews meets the consultant psychiatrists' expectations.

The finding that 79.2% of responders felt the reviews provided them with new information about their patients is a very strong endorsement of their value. The free text comments given in answer to the associated question (Table 5), show that consultants gain access to otherwise hidden or unknown information. This information may be used to support future treatment.

Questions 11 and 12 asked consultant psychiatrists to indicate how often they act on the recommendations made in reviews. The finding that recommendations are acted on only some of the time was unsurprising. The patients are usually already receiving treatment and some respond to that, meaning the recommendations given do not need to be implemented at that time but may support future care. Sometimes the reviews are undertaken to provide a 'Plan B' should current treatment fail. This complete quote best summarises why these recommendations are not always implemented: *"Usually you know the patient well enough to foresee that a certain recommendation probably won't work - applying clinical judgement versus formulaic approaches."*

The value in providing options comes in aiding consultant psychiatrists, multidisciplinary teams and patients reach a consensus on the most appropriate approach to future care. Indeed, the comment highlighting the value of 'another professional's opinion' is evidence of the benefit consultants attach to clinical pharmacy support. The acknowledgement of the value working with consistent pharmacy input ('named pharmacist with knowledge of the patient') demonstrates the position of clinical pharmacists as essential members of the mental health multidisciplinary team.

The challenge from this evaluation is to take the findings and use them to improve this aspect of the clinical pharmacy service. Potential areas for improvement may include the following.

- Using the answers to question 1 and the patient characteristic data to develop formal referral criteria. These will aid the service to manage workload but also support multi-disciplinary teams identify patients who may benefit from a review.

- Using the comments provided to develop a service standard that will support a common format for these reviews across the service.
- Although not directly commented on, there is a need to consider how best to involve patients in the process. This may help exclude treatment recommendations that may be unacceptable to the patient.
- Introducing a feedback/evaluation form with each review to allow immediate feedback from the multidisciplinary team and improved monitoring.
- Introducing a peer review process to monitor the quality of the reviews.
- Developing mechanisms to capture the outcomes e.g. have recommendations been implemented and what was the patient outcome?

The results of this review will be used to develop service standards, a formal referral process and a patient outcome tool for medication history reviews.

## Conclusion

The review has confirmed the value of the medication history review service to the consultant psychiatrists who requested the service and has identified how it can be further improved.

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## Declaration of interests

Andrew Walker has nothing to disclose.

## References

1. The Scottish Government. Mental Health Strategy for Scotland 2012-2015. August 2012. Available at: <http://www.gov.scot/Publications/2012/08/9714> . [Accessed 221015].
2. The Scottish Government. Prescription for Excellence: A Vision and Action Plan for the right pharmaceutical care through integrated partnerships and innovation. September 2013. Available at: <http://www.gov.scot/Resource/0043/00434053.pdf> . [Accessed 221015].