

Pharmaceutical Care Audit

Ready-to-go series



Complete audit

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Introduction

How often do we do something and think of ways that it could be improved if only....? In a busy practice it is all too easy to continue dealing with the same problems time and time again without stopping to think of solutions. Often the solutions require the co-operation of others, and this is time consuming. But if we do stop and think, a small investment of several people's time may be fruitful in the longer term.

Quality improvement, as a professional responsibility for all the caring professions, is often undertaken through a process of peer review or audit.

This programme has been designed to ensure that changes effected though audit are evidence based where ever possible, and reflect the standards and good practices set by the health professions.

Conducting the audit

This audit is designed for pharmacists providing a pharmaceutical care service or those moving into pharmaceutical care. It will also help pharmacists wishing to incorporate elements of pharmaceutical care into services that they already offer. It gives a framework for pharmacists to use to assess the quality of their work.

Pharmaceutical care is not easy to audit because the care given to each patient will be different. Each patient is different and may require quite different care to another patient with a similar condition. The best way of auditing pharmaceutical care is by peer review. In a peer review group, a practitioner will present an anonymised case study to his/her peers and seek their critical appraisal of the care plan and evaluation. This allows practitioners to learn from each other and thus improve their performance.

However, peer review groups may not be possible because of the low number of pharmacists practising pharmaceutical care in an area. This audit can therefore be performed by an individual practitioner on his/her own or by a group of practitioners in a peer review group.

The audit takes you through the process of pharmaceutical care from patient selection, assessment, care planning to evaluation. It consists of a series of brief statements about good practice followed by some questions that practitioners can ask themselves.



Each set of questions are clearly identified by this symbol at the side of the page: -

We have tried not to be proscriptive in what we suggest, rather we have asked questions that will encourage the practitioner to reflect on his/her practice to see if it can be improved.

There are many definitions of pharmaceutical care and the term has been used to describe different things, some of which are pharmaceutical care and some of which are only a part of pharmaceutical care.

The original definition of pharmaceutical care came from work conducted by Hepler and Strand.

“The responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life.” (1)

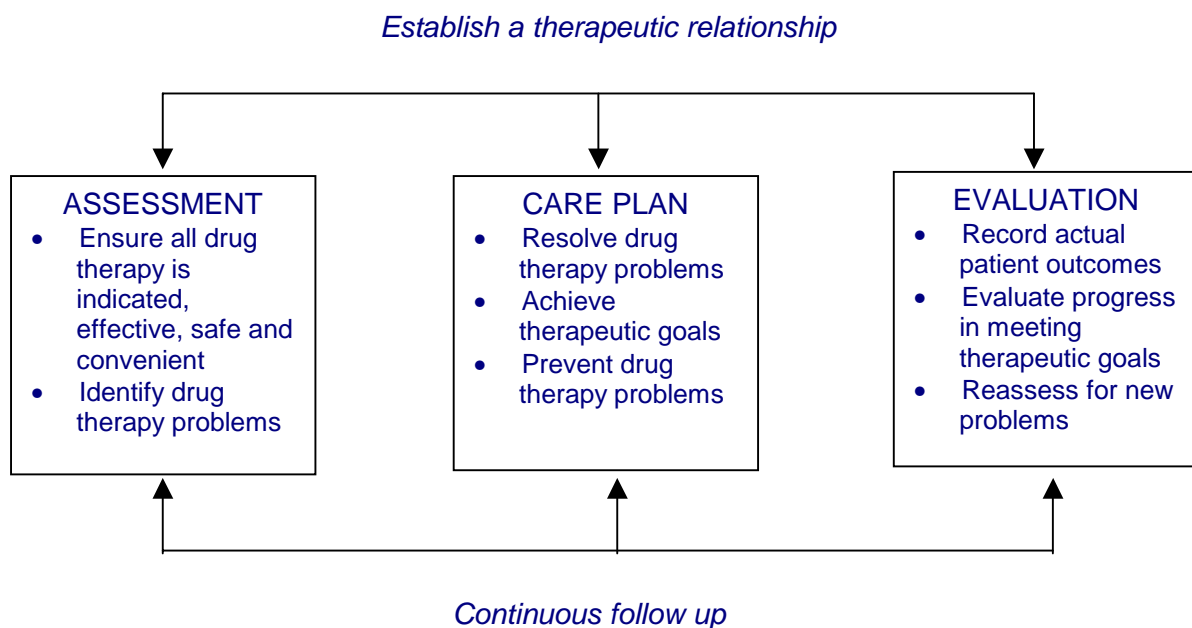
Since that time, Professor Linda Strand has developed a more holistic approach, based on the needs of the patient. She has developed the idea of a pharmaceutical care practice similar to the way in which doctors and nurses practice. Her new definition of pharmaceutical care is: -

“A practice in which the practitioner takes responsibility for a patient’s drug related needs and holds him or herself accountable for meeting these needs.” (2)

Pharmaceutical care can be delivered in primary or secondary care, in the pharmacy or in the GP practice, in the clinic or in the patient’s home. Where it is delivered is not important, but how it is delivered and the thinking behind it is.

The pharmaceutical care process has three phases. These are assessment, care plan and evaluation. This model reflects the medical and nursing approach to delivering care. In all these models the needs of the patient are first assessed, resource/treatment is given and the outcomes are evaluated.

The elements of each phase are shown in the diagram below.



The Minnesota Pharmacists Association have developed an assessment tool to confirm the competence of pharmacists to conduct pharmaceutical care. In this tool, they refer to the seven elements of pharmaceutical care. (3)

The seven elements of pharmaceutical care.

1. Review all active medications.
2. Link each medication to an appropriate indication.
3. Assess actual or potential drug therapy problems.
4. Take action to resolve and/or prevent drug therapy problems.
5. Establish a care plan with the patient to achieve desired therapeutic goals for each medical condition and drug therapy problem, and plan for follow-up evaluation.
6. Follow up with the patient to evaluate actual patient outcomes and status of the patient's medical conditions.
7. Document above elements in a readily retrievable, billable fashion.

This describes the process of pharmaceutical care and emphasises the importance of good documentation. Each part of the process needs to be recorded and the records will provide evidence of the care given. The records need to be structured and utilise a common language. Several authors have emphasised the need for standardised documentation (4,5). In this audit, we have listed some of Strand's definitions of outcomes and drug-related problems. Using standard definitions allows you to compare disparate interventions and build a picture of your care.

Pharmaceutical care is based on the individual patient's needs and the care plan will be tailored to the individual. There may be similarities between the care plans of patients with similar conditions, however each care plan will be unique because it will take into account the individual variations between patients. Hepler has been working on therapeutic outcomes monitoring for some common conditions (6) and these may be helpful to refer to when forming an individual care plan.

Pharmaceutical care is a developing process. It will be further refined over the next few years. In the mean time, it is important that all practitioners review their work critically in order to provide the best possible care.

References

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4. Canaday BR, Yarborough PC. Documenting pharmaceutical care: creating a standard. *Ann Pharmacother* 1994;28:1292-6
5. Rupp MT. Standardising documentation for filing pharmaceutical care claims. *Am Pharm* 1995;NS35(9):26-30
6. Hepler CD et al. *J Am Pharm Assoc* 1997;37:145-8
7. Cipolle RJ, Strand LM, Morley PC. *Pharmaceutical Care Practice* Pub McGraw-Hill, New York 1998.

Identifying patients in need of pharmaceutical care

It is not possible to provide full pharmaceutical care to all patients. It is, therefore, important to prioritise a pharmaceutical care service and you will need a method for identifying those patients who most need pharmaceutical care.

Examples of candidates for pharmaceutical care.

Patients with asthma, diabetes, hypertension, high cholesterol levels, or other long term conditions.

Patients with chronic pain e.g. cancer patients or rheumatoid arthritis.

Patients on multiple medications

Patients with compliance problems

Patients with complex medication regimes

Patients referred by their doctor, nurse, etc.

Whether you are providing a pharmaceutical care service to a group of patients with similar conditions (e.g. diabetics) or offering the service to all your patients who would benefit, it is essential that you have a way of selecting those who would benefit most from the service.

Identifying
priority
patients



Do you have a method for identifying priority patients?

Is this followed consistently?

If you are accepting referrals, do the doctors, nurses, etc referring to you know your referral criteria?

1. Assessment

Assessment of the patient's needs is the first phase of the delivery of pharmaceutical care. The quality of the care given will depend on how well this phase is conducted. You can audit this phase by looking at each stage of the process and reflecting on whether your initial patient interview has allowed you to: -

- Obtain sufficient information about the patient
- Review the appropriateness of all medication
- Assess any drug related problems.

1.1 Obtaining information

The first stage of any assessment process is obtaining sufficient information about the patient to base your assessment on. The patient information can be broken down into four distinct areas :-

a) Patient data

You will need to obtain information about the following:

Brief personal details
Patient's general health and activity
Past medical history
Drug/food allergies
Diagnosis and history of present illness
Medication history (including OTC medications)
Social history (e.g. do they have a carer or any social services support?)
Family history

Patient data



Have you obtained sufficient patient data to conduct your needs assessment?

Is the information recorded in an organised and readily retrievable manner?

Is confidentiality assured in both the collection and storage of patient information?

b) Relevant physical or biochemical assessments

Physical or biochemical tests may give you an indication of the patient's condition. These must be valid measures, which are relevant to the condition or disease being treated.

Relevant physical or biochemical assessments



Are there any objective tests that can be conducted in the pharmacy that will give you a baseline measurement the patient's condition? (e.g. Blood pressure monitoring, peak flow monitoring, etc)

Does the patient know the results of any relevant tests, such as blood glucose measurements if they are diabetic?

If the patient uses devices such as inhalers or syringes, have you checked their ability to use them correctly?

c) Secondary sources of information (e.g. GP, specialist nurse, carer, etc)

Other healthcare professionals will be treating the patient. They will have information about the patient that may be relevant to the pharmaceutical care you give. The patient's carer may have a different view about the patient's ability to care for themselves.

Secondary sources of information



Have you considered supplementing or clarifying the information obtained from the patient by contacting the patient's doctor or specialist nurse?

Will seeing the patient's medical notes give you a clearer picture of the patient's condition and test results?

Do you need to speak to the patient's carer to get a clearer picture of the patient's needs? (Carers may be better placed to tell you how the condition affects the patient's ability to look after themselves.)

d) Patient feelings and perceptions about their condition/disease and treatment

The patient's beliefs about their treatment will affect whether they are likely to comply with the prescribed treatment. E.g. if they do not believe that the treatment is necessary, they are less likely to take it.

You should try to find out what the patient's goals are from their therapy.

E.g. if the patient is being treated with analgesics– do they expect to be totally pain free; pain free except when they move; have a reduced level of pain or do they really want to have a good nights sleep.

All patients should understand about their medication (e.g. what it is used for, how to take it, etc.)

Patient feelings and perceptions about their condition/ disease and treatment



Have you attempted to determine the patient's beliefs about their treatment?

What are the patient's goals from their therapy?

Are there any barriers to compliance?

Do they understand what each medication is used for and how to take it, etc?

1.2 Prescription review

The prescription can now be reviewed to see if the choice of therapy and doses are logical. Each item needs to be assessed in terms of indication, effectiveness, safety and compliance.

Prescription review



Ask yourself the following questions about each medication: -

Is there an indication for the medication and is it an effective choice?

Could the choice of medication be improved or rationalised?

Are the doses reasonable for condition being treated and the age of the patient?

Are there any interactions or evidence of adverse effects?
 Could the overall regime be simplified to aid compliance?
 Is there a national or local treatment protocol for this condition/disease?

1.3 Assessment

Your review of the prescription will lead you to form an initial assessment of the patient's drug-related needs.

Professor Linda Strand categorises drug related problems in the following manner. (7)

Assessment	Drug Therapy Problem	Explanation
Appropriate Indication	Needs additional drug therapy	E.g. untreated condition, requires preventative therapy, etc.
	Unnecessary drug therapy	E.g. no indication, duplicate therapy, etc.
Effectiveness	Wrong drug	e.g. Contra-indicated, more effective drug available, etc.
	Dosage too low	e.g. dose, frequency or duration too low
Safety	Adverse drug reaction/interaction	e.g. Allergic reaction, undesirable effect, etc.
	Dosage too high	e.g. Dose, frequency or duration too high
Appropriate compliance	Compliance problem	e.g. Unable to swallow, directions not understood, patient does not want to take, etc.

Classifying the drug related problems in this way would help you to assess the benefits of your service.

You should also consider whether they have other care issues that you, or another healthcare professional, can help with.

Assessment



Do you use a systematic method of classifying drug related problems?
 Have you thought about their needs for information about their medication?
 Does the patient have fears about dependence or side effects that need addressing?
 Do they need further support in order to reach their goals?
 Should you be promoting better self care? (e.g. self monitoring of peak flows, etc.)
 What about promoting healthy lifestyles? (e.g. support to stop smoking, etc.)

2. Care Plan

The pharmaceutical care plan is a written record of the drug related need and/or care issue; the proposed action to resolve the problem or meet the need and the desired outcome.

2.1 Action

The pharmacist must decide what action will help to resolve each drug related need or care issue identified by the needs assessment. These may include suggesting changes to the patient's drug regime, counselling the patient about their medication, supplying compliance aids, recommending ways of monitoring the progress of therapy, referring the patient to another healthcare professional, informing their doctor/specialist nurse of your concerns, etc.

Action



Is each action related to a need?

Are the actions prioritised so that the most important needs are dealt with first? (e.g. it is no use resolving a compliance problem before ensuring that the regime is suitable for the patient.)

Are you the best person to action all the needs or should you refer the patient to another healthcare professional?

2.2 Outcome

In addition to proposing action, the pharmacist should agree the desired outcome with the patient. The outcome can be identified in different ways. They may be phrased in terms of: -

The effect on the patient	e.g. "Less days off work"
Clinical disease state end points	e.g. "Resolution of depression"
Drug therapy end points	e.g. Termination of prescription for naftidrofuryl
Monitoring end points	e.g. Lipid levels maintained in desirable range
Patient understanding	e.g. Patient understands the difference between a reliever and a preventer inhaler

Each outcome must be both specific and measurable either subjectively or objectively. Use objective measures wherever possible because these will be the most reliable indications of the effect of your service. However, you will not be able to use objective measures for every need identified. Subjective measures are valid measures to use for some outcomes, but you should be aware that vague statements such as "improved mobility" are difficult to assess. It is much better to give specific examples of tasks that the patient will be able to perform if their mobility has improved (e.g. able to walk unaided). Similarly, outcomes such as "improved understanding of their medication" will be difficult to measure. A more measurable outcome would be "understands the difference between a reliever and a preventer inhaler".

Outcome



Have you used a variety of outcome measures (effect on patient; disease state end points; drug therapy end points; monitoring end points and patient understanding)?

Review each outcome – Is it measurable?

Is it specific?

Is the outcome relevant to the original need?

Can you use an objective measure?

Are the outcomes agreed with the patient?

3. Evaluation

A pharmacist delivering pharmaceutical care takes responsibility for ensuring that the patient's pharmaceutical care needs are met. This cannot be done unless the effect of the action taken is evaluated. The patient's progress must be regularly reviewed using subjective and objective measures. The actual measures used will depend on the desired outcome. The measures used must be appropriate to the outcome and use valid measurement tools.

Many measurement tools have been developed to evaluate a patient's response such as depression scoring systems, inhaler technique instruments, etc. The Royal Pharmaceutical Society has posted several audit tools on its web site at www.rpsgb.org.uk/audhome.htm.

The method you use to evaluate the patient's response will depend on the type of outcome you wrote into your care plan.

If your outcome is worded in terms of the effect on the patient, you can simply ask the patient or carer whether the specific outcome has been achieved. It is important not to use vague questions such as "are you feeling any better?" since you will not necessarily obtain the information you need to evaluate whether the outcome has actually been reached.

If the outcome is about a clinical disease state end point, you will need evidence that the problem is actually resolved. E.g. If your desired outcome was "resolution of depression", you will need evidence that the depression is resolved rather than reduced. This may be obtained either from the doctor or by using a depression scoring system such as the ICD-10 or DSM-IV.

(World Health Organisation. International Statistical Classification of Mental and Behavioural Disorders 10th revision. Geneva, WHO, 1992
American Psychiatric Association. Diagnostic and statistical Manual of Mental Disorders, fourth edition. Washington, DC: APA, 1994)

A drug therapy end point outcome will be easily verified from the patient's prescription.

Outcomes based on monitoring end points will be reliant on the doctor or nurse ordering the tests and informing you of the results. The patient may also be aware of the latest results.

Patient understanding must be interpreted with care. You must again be specific about the information that you want them to know and should look for proof of understanding. It is not sufficient to ask whether the patient understands the difference between a reliever and preventer, they must be able to describe what each is used for and when to use the reliever.

Professor Strand has defined outcome measures that can be applied to the result of pharmaceutical care (7). These are: -

Status	Definition	Explanation
Resolved	Goals achieved, therapy completed	The patient's therapeutic goals have been achieved and drug therapy can be discontinued. E.g. antibiotic course for an acute infection.
Stable	Goals achieved, continue same therapy	The patient's therapeutic goals have been achieved, drug therapy continues. E.g. hypertension stabilised, no follow up needed for 3 months
Improved	Progress being made, continue same therapy	Positive progress is being made towards the patient's therapeutic goals, drug therapy continues. E.g. Improvement in asthma status following introduction of steroid inhaler. Follow up progress in 1 month.
Partial improvement	Progress being made, minor adjustments required	Some positive progress being made towards the patient's therapeutic goals, but some minor adjustments are indicated. E.g. Partial pain control with NSAID at moderate dose. Increase dose to maximum and re-assess after 2 weeks.
Unimproved	No progress yet, but continue same therapy	Little or no progress is progress being made towards the patient's therapeutic goals, but further improvement is expected. Care plan will not be substantially altered. E.g. Erythromycin for soft tissue infection causes some nausea after 24 hours. Patient needs re-assuring about nausea and to continue course for 3 – 5 days before re-assessment.
Worsened	Decline in health, adjust therapy	Decline in the health of the patient despite care plan. Changes in drug therapies are required. E.g. Pain is becoming worse despite using paracetamol 500mg qds, increase dose to 1g qds.
Failure	Goals not achieved, initiate new therapy	Present care plan and drug therapies have been fully tried out but no progress being made towards the patient's therapeutic goals. Discontinue current drug therapy and initiate new drug therapy. E.g. Chlorpheniramine for seasonal allergic rhinitis tried for 2 weeks with no improvement, change to beclomethasone dipropionate nasal spray.
Expired	Patient died while receiving therapy	Any important observations about drug related factors (or other care plan related factors) that contributed to the patient's demise should be recorded.

It is helpful to have a standard method of classifying the result of the pharmaceutical care given. This allows you to assess the benefits of your service and to provide sponsors with good data about the outcomes that patients have achieved.

Evaluation



- Are the measurements that you use specific and using valid measurement tools?
- Are the measurements appropriate to the desired outcomes?
- When you conduct a review, do you attempt to identify any further problems?
- Do you keep a written record of the patient's progress?
- Who do you share the information about progress with? (e.g. GP, specialist nurse, etc.)
- Are the review dates agreed with the patient in advance?
- Is the patient aware of how you intend to evaluate the effectiveness of your care?

This is the end of the audit. We hope that it has given you some ideas about areas of your practice that you would like to improve – or maybe it has confirmed that you are following the principles of pharmaceutical care in your practice.

If you have any comments about this audit, or would like to suggest ways that it could be improved, please write to: -

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