

# AUDIT OF DRUG WASTAGE



# Drug wastage

Audit Topic	This audit attempts to identify the main causes of medicines being returned to pharmacies for destruction and quantifies the amount and value of returned medicines.
Criteria	The wastage of medicines should be kept to a minimum.
Standards	It is not possible to put a figure to the standard without good practice research data or an initial audit to set a baseline.
Introduction	<p>Unwanted medicines are regularly returned to community pharmacies for destruction. Most pharmacists can relate stories of receiving hundreds of pounds of unused medicines from the relatives of patients who have died.</p> <p>Any medicine returned to a pharmacy must be destroyed. This is because the quality of the medicine can no longer be guaranteed. The RPSGB code of ethics states that all returned medicines must be destroyed.</p> <p>The cost to the NHS of unused medicines is enormous, not just in terms of the drug costs but also the treatment failures. Some wastage is inevitable – e.g. a patient experiences side effects to a medicine and has to stop taking it.</p> <p>However, a lot of drug wastage is preventable. Some examples of preventable wastage are discussed below.</p> <p>1. Poor compliance Total compliance with doctors' instructions is rare. However, excessive poor compliance (&gt;20% missed doses) or total non-compliance should be identified and attempts made to help or counsel patients.</p>



## Introduction (continued)

### 2. Inequivalence on prescriptions

Inequivalence is where different items on the same prescription are prescribed for different lengths. This forces the patient to manage their repeat prescriptions and only order the items that they really need. Some patients find this difficult and order all the items on the prescription whether they are needed or not. This in turn leads to hoarding of drugs.

### 3. Prescribing of excessive quantities

When a change in medication is made due to side effects or a change in the patient's condition, any discontinued medication is wasted. The amount wasted will depend on the original length of the prescription and when the prescription was last repeated. The prescribing of large quantities (e.g. over one month), especially when treatment is first initiated, leads to increased drug wastage.

The audit may be conducted as part of a campaign to persuade patients to return unwanted medicines for destruction (DUMP campaigns) or as part of the normal work of the pharmacy.

## Who to involve in the audit

This audit may be conducted by a single pharmacy or by a group of pharmacies in a locality. The more pharmacies that are involved, the more powerful the results will be.

Any audit of drug wastage must involve prescribers since they are the ones who are able to make the most changes. The involvement of prescribers is best obtained at the beginning of the audit to ensure maximum ownership of the audit.

It may be helpful to gain the support of the Health Authority or Health Board - they will be interested in keeping drug waste to a minimum. They may also be able help with data analysis and accessing prescribing data for the area.

If there is a local Primary Care Audit Group (or equivalent), they may also be interested in the audit and may be able to advise you or offer practical support.

## Data to be collected

The audit should attempt to identify both what is returned and the reason for the return. Some returns will be inevitable, but we are particularly interested in identifying wastage that could have been prevented or minimised. Quantifying both the amount and the cost of the wasted medicine is crucial to the success of the audit. This may be decisive in persuading prescribers of the need for change and the Health Authority/Health Board of the need to support this work.

The data that you need to collect are:

Drug name  
Strength  
Form  
Amount returned  
Reason for return  
BNF code  
Cost

In addition, you may decide to collect information about the patient's name, the prescriber (or GP practice) and the duration of the original prescription.

## Factors to consider in data collection

1. When collecting the data, you will need to consider whether to include all returned medicines or whether to limit it to patients from one GP practice or one Health Authority/Health Board area. This will largely depend on whether you are working on your own with one GP practice or as part of a group audit covering an area.

You may decide that it is too complicated to limit the data in this way and you will include all returned medicines. However, if you are part of a group audit you will need to ensure that everyone is doing the same.

2. It is important to clearly define the data to be collected to ensure that everyone collects the same information.
  - a) The codes used must be the same
  - b) If each pharmacist is entering the BNF code, which code should be used?  
e.g. Penicillin V could be coded 5 for infections; 5.1 for anti-bacterials; 5.1.1 for penicillins.
  - c) If each pharmacist is costing the item, then a common source of costs must be agreed. E.g. Drug Tariff.
3. In a group audit, it may be possible for one person to analyse all the data. If this is the case, they may also be able to do the costing and enter all the BNF codes.

### Length of the audit

The audit must be conducted over a sufficiently long period to ensure that the data is representative but not too long so that the participants lose interest.

Experience shows that a month is a suitable time period for most audits.

### Quality of data

When the data has been collected, you will need to ask several questions before analysing it. This is to ensure that only data that is of high quality is included in the analysis.

Is data complete and accurate?

Have all returns been entered onto the data collection form?

Was sufficient information collected to give an accurate picture of wasted medicines?

### Data analysis

A group audit will generate a large amount of data. It will be difficult to analyse the data without a computer with either spreadsheet or database functions. Although there is a large amount of data, it is unlikely that you will need to do a statistical analysis on the data unless you intend to publish it.

The sorts of analysis that will prove most helpful are:

Top x drugs wasted

Ranking of BNF categories wasted

Reasons for wastage

All of these can be presented in graph form in two ways. They should be shown in quantity ranking and cost ranking. This will show the drugs, BNF categories and reasons that occur most frequently and that cost the most.

The total cost of the drug wastage should be calculated and a projection made to annual costs over the Health Authority/Health Board.

It may be possible to compare these results with prescribing trends over the area by obtaining a breakdown of prescribing from the local Health Authority Pharmaceutical Adviser or Health Board CAPO. This will highlight any drugs at increased risk of wastage compared to the level of prescribing.

### Data analysis (continued)

If the data allows, you may wish to break the data down by prescriber or GP practice to give each practice their own results. However, you need to be careful about doing this because the individual results will be affected by which pharmacies took part in the audit as well as the list size of the practice.

When presenting the results to local GPs, we have found it helpful to prepare graphs and pie charts illustrating the results. This is much easier to relate to than just figures. It is also worth preparing brief handouts for the GPs to take away.

We have also found it helpful to supplement the information with “case studies”. These are examples that illustrate the problems encountered by patients and support any messages that you are trying to get across. Using both figures and the anecdotes will be much more powerful than just the figures alone.

### Making the change

It is important that the problem is seen as a joint problem between you and your GP colleagues. The audit should not be seen as an audit of the GP’s prescribing. Any suggestions that you make about change must be realistic and based on the evidence.

Look closely at the causes for medicines being returned. These will highlight where there is most potential for change. Think about what pharmacists can contribute as well as what GPs can do.

The discussions about change should involve all parties including the GPs, community pharmacists and Health Authority/Health Board. Think about how changes can be made and who will make them. If the problem will require changes to the GP prescribing computer system, can funding be obtained to allow someone to do this?

If compliance is seen to be a problem, how will you tackle this? Would the savings from wastage, etc justify a compliance counselling service?

### Reviewing the change

After any change has been made, it is important to check whether it has worked. The change should be subject to audit to ensure that it is efficient and effective.

## Example Data Collection Sheet – Drug Wastage

Pharmacy name \_\_\_\_\_

Pharmacy Address \_\_\_\_\_

Id No	Drug name	Strength	Form	Amount returned	Reason for return	BNF Code	Cost
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							

Example codes for reason for return

- |                   |                                 |
|-------------------|---------------------------------|
| D – Death         | S – Drug Stopped                |
| C – Compliance    | U – Unknown                     |
| I – Inequivalence | O – Other (Please state reason) |

