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Aneurin Bevan
University Health Board

Good Practice Guidance: Medication Expiry Dates

For use in Care Homes

Name of Care Home:	
Signature of Care Home Manager:	

This guidance is primarily for care home staff but also mentions good practice tips for prescribers and community pharmacists.

Introduction

There is much confusion about the issue of expiry dates within care homes. This has led to issues with patient safety and the wastage of medication. National guidance is not available for all products and this guidance will improve patient safety; reduce wastage and support sensible medicine use in care homes.

Definition

The expiry date is the point in time when a pharmaceutical product is no longer within an acceptable condition to be considered effective. The medication reaches the end of its 'shelf life'.

Depending on the product, the expiry date may be set as a fixed time:

- after manufacture
- after dispensing
- after opening of the manufacturer's container

The shelf life of products is determined by either the breakdown of the active drug or by risk of contamination. Not all drugs deteriorate at the same rate. The expiry date (use by date) for any medication is calculated by the manufacturer and it is a legal requirement for it to be printed on the original container from the manufacturer.

As part of good medicines management, patients should receive medication that is "in date"

- To ensure that the active ingredients are fully effective
- To reduce the risk of contamination
- To ensure that it is safe to use

Medicines may go "out of date" because of:

- Inefficient prescribing or re-ordering systems
- Stockpiling
- Receiving excessive quantities
- Poor stock rotation and not checking expiry dates (ensure the community pharmacist provides a batch number and expiry date on any medicines decanted from bulk containers)

Storage Guidelines

- Keep all medication in the original container in which they were dispensed
- Keep medicines in their original outer packaging, to protect from sunlight
- All medicines should be stored in a cool (below 25°C) dry place unless refrigeration is required (between 2°C and 8°C)
- The expiry date of products can change once opened
- Record the date opened and the calculated expiry on the medicine package/label
- Be vigilant with product expiry dates
- Store as recommended by the manufacturer
- Use disposable gloves per patient when applying creams or ointments
- Medication should be person specific and 'sharing' of medicines including creams and ointments is prohibited
- Seek advice from the community pharmacist if medicines are found to have been stored outside their intended conditions or if their dispensing labels become illegible.

Effects of Using Expired Stock

- The active drug could become chemically unstable
- The effectiveness of the drug may change
- The breakdown products of the drug may be toxic and harmful to the patient
- Increased risk of contamination

Example Expiry Dates

Wording on Packaging	Definition
Best before January 2012	Discard 31/12/2011
Use before end January 2012	Discard 31/01/2012
Use by January 2012	Discard 31/12/2011
Discard after January 2012	Discard 31/01/2012
Expires January 2012	Discard 31/01/2012
Use within one month of opening	Self-explanatory (ideally every 28 days)
Discard 7 days after opening	Self-explanatory

Generally, solid dose formulations have a longer expiry date than liquid preparations. The manufacturer's expiry on a container is the unopened expiry date. After opening, the expiry date may be dramatically shortened. This should be highlighted on the medicine label or container or in the service user's medicine profile.

Certain external factors can affect expiry – contact with water, temperature, air or light e.g. antibiotics to be taken as a liquid formulation are stored in the pharmacy as a dry powder which is then reconstituted with water and then given a shorter expiry date.

Monitored Dosage Systems (MDS)

It is recommended that medicines dispensed in a MDS are discarded after 8 weeks if they have not been used. Please note not all medicines are suitable for inclusion in MDS for example:

- Medicines that may be harmful when handled, e.g. cytotoxic products like methotrexate
- Medicines that are sensitive to moisture, e.g. effervescent tablets
- Light-sensitive medicines, e.g. chlorpromazine
- Medicines that should only be dispensed in glass bottles, e.g. glyceryl trinitrate (GTN)
- Medicines that should only be taken when required, e.g. painkillers
- Medicines whose dose may vary depending on test results, e.g. warfarin.

In all cases, the printed manufacturer's expiry date should be used if it is earlier than the suggested guideline dates listed in the table below.

Some products now show an expiry symbol e.g. . However, in the care home setting where storage conditions may be variable, it is recommended that the above suggested expiry dates are followed.

Any product whose appearance suggests it may be unfit for use should be discarded – irrespective of expiry date. If there is any doubt contact the community pharmacy for advice.

When Required Medication (PRNs)

Be aware of the expiry date of PRNs especially if they are not used frequently. It is good practice to date and initial on opening all PRN medication for audit trail purposes.

Some Exceptions

Certain oral preparations have a shorter shelf life once they have been opened. Table 1 (page 5) shows some examples of medications and the different expiries from each manufacturer. Appendix 2 (page 8) list is not exhaustive and is only intended to cover some of the most frequently used products. Please add your own products as they become known to you. Many specials will have a short shelf life. Table 2 (page 6) gives further examples of medications with manufacturer specific expiry dates.

Table 1

Amitriptyline 25mg/5ml Solution SF

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Rosemont	24 months	6 months	Below 25°C	150ml
Thame Labs	12 months	30 days	Below 25°C	150ml
Wockhardt UK Ltd	24 months	1 month	Below 25°C	150ml

Amlodipine 10mg/5ml Oral Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Rosemont	1 year	30 days	Fridge (2-8°C)	150ml

Captopril 25mg/5ml Oral Solution SF

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Thame Labs	24 months	21 days	Below 30°C	100ml

Haloperidol 5ml/5ml Oral Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Thame Labs	2 years	30 days	Below 25°C	100ml
Pinewood Healthcare	3 years	None noted	Below 25°C	100ml

Levothyroxine 100mcg/5ml Oral Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Ten Pharma	As per bottle	28 days	Below 25°C	100ml
Wockhardt UK Ltd	2 years	3 months	Below 25°C	100ml
Creo Pharma Ltd	18 months	2 months	Below 25°C	100ml
Advanz Pharma	18 months	8 weeks	Below 25°C	100ml

Lorazepam 1mg/ml Oral Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Thame Labs	24 months	60ml – 30 days 150ml – 90 days	Fridge (2-8°C)	60ml 90ml

Metformin 500mg/5ml Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
ADVANZ Pharma	18 months	28 days	Below 25°C	150ml
Colonis Pharma	15 months	60 days	Below 25°C	150ml
Pinewood Healthcare	15 months	60 days	Below 25°C	100ml
Rosemont	1 year	28 days	Below 25°C	100ml

Oxycodone 5mg/5ml Oral Solution

Manufacturer	Shelf Life (unopened)	Shelf Life (once opened)	Storage Requirements	Pack Size
Wockhardt UK Ltd	3 years	1 month	Below 25°C	250ml
Napp Pharmaceuticals	4 years	None noted	Below 30°C	100ml
Qdem Pharmaceuticals	4 years	None noted	Below 30°C	100ml

*taken from product SPC

Tips for Care Home Staff

Ordering Medication

- Check quantities of medication ordered are appropriate in order to avoid medication waste
- Do not forget to check medication not routinely stored in the medicines trolley e.g. PRNs, topical preparations, fridge items, CDs
- A nominated member of staff should be responsible for ordering medication with a named deputy
- Request PRNs in original packs rather than in MDS. (MDS has reduced expiry therefore more frequent prescriptions will be necessary and more medication waste generated)

Receiving Medication

- Check if there are any specific expiry date instructions on labels e.g. some liquid antibiotics
- Check the medication is still within its expiry date

Storing Medication

- Note and act on any specific storage instruction e.g. store in the fridge
- Rotate stock so the earliest expiry is at the front and therefore used first i.e. 'first in, first out'
- Check expiry dates of medication stock monthly (use sample provided - see Appendix 1)
- Medication is to remain in the container in which it was received – batches must not be mixed
- Ensure to use medication dispensed in amber first as these have previously been open in the pharmacy and are subject to a lesser expiry

Administering Medication

- Check expiry date before each administration
- Record the date opened and the calculated expiry on the medicine package/label where appropriate e.g. creams, eye drops. Some packaging does not allow for the pharmacy label to be placed on the product e.g. eye drops. In these instances the outer packaging will have to be endorsed with the date of opening. It is essential that the product remains in the outer packaging throughout duration of the treatment
- Highlight any short expiry as a reminder to all staff
- Any product whose appearance suggests it may be unfit for use should be discarded – irrespective of expiry date. If there is any doubt contact the community pharmacy for advice
- Use only one unit at a time, e.g. having multiple bottles of an a medication open increases the risk of;
 - using one that has expired
 - not getting to the end of the cycle with enough stock that is in date

Tips for Prescribers

Prescribing Quantities

- Prescribe appropriate quantity of medication in order to avoid waste
- Quantities which appear to be excessive should be queried

Repeat Prescribing Process

- Consider nominating a named practice member to process care home prescription requests and to act as contact known to the care home to deal with queries

Tips for Community Pharmacists

Dispensing Medication

- If decanting from bulk container, label with appropriate expiry date
- Highlight any shortened expiry dates
- Do not obscure expiry dates with labels
- If the care home generally receives medicines in a MDS, inform staff if a particular medicine is unsuitable for inclusion due to problems with stability. The foil packing around individual tablets must not be cut and placed in a MDS; doing so has potential to cause harm if inadvertently swallowed by service user

Further Information / Resources

- RPS – The Handling of Medicines in Social Care
- British National Formulary.64th ed. London: BMA and Royal Pharmaceutical Society; 2012

Table 2

Examples of Products with Manufacturer Specific Expiry Dates**	
Persantin Retard (Dipyridamole SR)	6 weeks after opening original dispensing container. Once capsules are packed down into another container then 4 weeks expiry
Glyceryl Trinitrate Tablets	8 weeks after opening
Madopar Capsules and Tablets	2 weeks when dispensed into another container
Nicorandil	Manufacturer recommendation, then once opened each blister has a 30-day expiry . Use each blister strip at a time before opening the next. The blister strip contains a drying agent to protect the tablets from moisture which should NOT be removed or swallowed.
Asasantin Retard Capsules	6 weeks after opening original dispensing container. Once capsules are packed down into another container then 4 weeks expiry
Chlorpromazine Syrup 25mg/5ml & 100mg/5ml (Rosemont)	6 months after opening
Gastrocote Liquid	1 month after opening
Largactil Syrup	1 month after opening
Oramorph 10mg/5ml Liquid	90 days after opening
Risperdal 1mg/ml Liquid	3 months after opening

**this list is not exhaustive

These guidelines are based on general consensus and not evidence-based due the lack of information available. Medications are subject to correct storage at ambient temperatures as recommended by the manufacturer.

Medication Expiry Date Checklist

Reducing the risk of out of date, discontinued or unwanted stock being administered

Care Home _____ Floor /Unit _____ Year _____

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Dressings												
Topicals												
Tablets & Capsules												
Liquids												
Fridge Items												
Trolley Items												
CD Cupboard												
Homely Remedies												
Nutritional Supplements												

Every month each section should be checked for out of date, discontinued or unwanted medication. Fill in the box once complete.

Check all items dispensed in amber bottles and follow the suggested expiry information.

Suggested Expiry Dates of Medicinal Products Once Opened

Formulation Type	Expiry Details*	Comments
Tablets & Capsules In original blister strips or container with printed expiry date	Manufacturer's expiry date as printed on original box or individual foils (check patient information leaflet)	PRN (when required) medication, wherever possible, should be used from the manufacturer's original pack. (The expiry date is printed on each strip).
Tablets & Capsules Dispensed in amber bottles	6 months from date of dispensing	Or as advised by Pharmacy
Aspirin Dispersible Tablets Stored in amber bottles	1 month from date of dispensing	
Tablets & Capsules Stored in pharmacy packed blisters i.e. MDS	8 weeks from date of dispensing	
Oral liquids In original manufacturer's packaging or amber bottles	6 months from date of opening or follow manufacturer's guidance e.g. for specially manufactured items or expiry date on packaging. For antibiotics, check with community pharmacist if not clear from label.	Estimate the amount of any liquids carried over. Medicines retained for use should be recorded in the 'carried forward' section of the MAR chart.
Oral Liquids Dispensed in amber bottles	3 months from when the original bulk container was opened	The pharmacy should put an expiry date on the bottle before sending to the Home taking into account when opened in the pharmacy
External liquids (Lotions, shampoos & bath oils)	6 months from opening	Or manufacturer's recommendation if shorter
Creams In tubes or pump dispensers	3 months from date of opening or manufacturer's recommendations if shorter	Write the DATE and initial when opened on the dispensing label for audit trail purposes
Creams in pots, tubs or jars	1 month from date of opening	order appropriate amounts, if only using 100g, don't order 500g
Ointments In tubes or pump dispensers	6 months from date of opening	Or manufacturer's recommendation if shorter
Ointments In pots, tubs or jars	3 months from date of opening	Or manufacturer's recommendation if shorter
Sterile Eye/Ear/Nose drops/Ointments	28 days from date of opening	Care with items needing fridge storage
Rectal Diazepam	Individual Foil Wrapped Tubes	Manufacturer's expiry date
	Non-foil Wrapped	6 months from date of opening
SIP Feeds / Oral Supplementary Nutrition	Unopened, follow Manufacturer's expiry date.	Follow manufacturer's guidance once opened (most keep for 24 hours in fridge)
Inhalers	Manufacturer's expiry date	Some newer inhalers have a shortened expiry after dispensing or once opened, these should have a written expiry date by pharmacy
Glyceryl Trinitrate Sprays	Manufacturer's expiry date	
Insulin	Unopened: Manufacturer's expiry date when stored in a fridge at between 2°C and 8°C. Once opened: 4 weeks for insulin vials and pens unless otherwise stated. When in use can be kept at normal room temperature (i.e. less than 25°C).	One pen/ cartridge will often be sufficient per month. (A box of 5 will rarely be needed every month). Ask the G.P to prescribe the nearest number of pens/ cartridges needed per month to reduce stock piling.
Any product whose appearance suggests it may be unfit for use should be discarded – Irrespective of expiry date. If there is any doubt contact the community pharmacy for advice.		

*unless otherwise stated by manufacturer and still within manufacturer's expiry date