

THE SAFE USE OF MULTI-COMPARTMENT COMPLIANCE AIDS

Background

The use of multi-compartment compliance aids (MCA) has become the default solution to poor medication adherence, and is often integrated into practice and service policy without giving due consideration to product stability and patient safety.

The Royal Pharmaceutical Society recommends **the use of original packs of medicines**, supported by **appropriate pharmaceutical care** as the preferred intervention for the supply of medicines in the absence of a specific need for a multi-compartment compliance aids (MCA).

There is insufficient evidence to support the benefits of MCAs in improving medicines adherence in patients, and the available evidence indicates that MCA should not automatically be the intervention of choice for all patients. However, there is some evidence to indicate that MCA may be of value for a very small number of patients who have been assessed as having practical problems in managing their medicines. Each patient's needs must be assessed on an individual basis and any intervention must be tailored to the patient's specific requirements. The assessment tool currently used to determine patients' suitability for multi-compartment compliance aids (MCA) in community and secondary care are outlined in appendix 1.

Stability of Drugs in Compliance Aids

Not all medicines are suitable for inclusion in MCA. Furthermore, all stakeholders should recognise that the re-packaging of medication from the manufacturer's original packaging may often be unlicensed and involves risks and responsibility for the decisions made. Manufacturers of medicines have robust data on the stability of their products when stored in their original packaging. However, there is very little reliable data available on the stability of medicines after they are removed from their original packaging and stored under different condition.

The UK Medicines Information makes recommendations on the suitability of solid dose forms for transfer from the manufacturers' original packaging to multi-compartment compliance aids (MCAs) based on:

- Physico-chemical stability and characteristics of the medicine and its formulation(s).
- Advice, where available, from manufacturers
- Data, where available, on storage in MCA

This information can be found on the Specialist Pharmacy Service website: [UKMI Medicines Compliance Aid Stability](#)

General Rules: Drugs excluded from MCA

- Soluble, effervescent and orodispersible formulations
- Chewable, sublingual and buccal tablets
- Non-tablet/capsule formulations i.e. suppositories, liquids, powders, wafer formulations etc
- Drugs which may cause skin reactions / hypersensitivity reactions on prolonged contact e.g. chlorpromazine.
- Cytotoxic potential.
- Drugs requiring special temperature control i.e. fridge,
- Moisture sensitive preparations, their packaging usually contains drying agents to indicate the relative instability of the drug when exposed to moisture: e.g. nicorandil
- Medicines whose dose may vary frequently depending on test results, e.g. unstable INR with warfarin
- Medicines intended for "as required" use e.g. analgesics, laxatives

- Medicines that have special administration instructions and must be identified individually in order to do this safely e.g. alendronate Individual clinical assessment may override stability concerns

MCA FAQs

<u>QUESTION</u>	<u>ANSWER</u>
Who decides when to use an MCA?	This should be based on a robust individual patient assessment, usually by the community pharmacist, to ascertain the most appropriate method of dispensing. It would be beneficial for pharmacist and prescriber to discuss this decision. It is useful for the prescriber to carry out a clinical medication review as part of the assessment, to see if therapy can be rationalised
Can a prescriber request that a patient has their medicines dispensed in an MCA?	If a prescriber thinks a patient might benefit from an MCA, they should refer the patient to their community pharmacist for a robust assessment of their needs. Prescribers and pharmacists should understand the potential liability issues when requesting or supplying a medicine in an MCA. Removing a medicine from the manufacturers packaging means that it is no longer licensed, and responsibility for the stability of the repackaged medicines transfers from the manufacturer to the prescriber and pharmacist
Do prescribers have to issue 7 day prescriptions for patients with blister packs?	Seven-day prescriptions are only needed if a joint decision has been made by the prescriber and pharmacist, on clinical grounds, that medication should be issued to the patient on a weekly basis. This would be appropriate for patients who are managing their medicines themselves and for whom receiving more than one MCA at a time may be confusing or dangerous. It is important to be aware that if a 28 day prescription is issued, where weekly MCAs are filled, all 4 will be issued at once. This is a legal requirement under the pharmacy terms of service
Should prescribers issue 7 day prescriptions for care homes?	Patients in care homes should not be issued with 7 day scripts. This should only be considered for individual patients who manage their own medicines. Reliance on medicines supplied in monitored dosage systems (MDS) within care homes and care at home services should be challenged. Patients should be encouraged to self-medicate where possible, and the decision to use monitored dosage system or compliance aid should only be made based on a robust individual patient assessment
What happens if changes are made to a patient's medication if using an MCA?	Depending on the urgency of the changes, it may be more practical to implement them at the end of a supply cycle. If this is not possible, the prescriber should liaise with the pharmacist and patient/ carer to ensure changes are made safely and promptly. Prescribers should be aware that if there is a change mid-cycle, a new prescription needs to be issued for all medicines, and that the pharmacist should ensure that contents of previously issued MCAs are discarded
How can medicines in an MCA be identified?	MCAs are labelled to include descriptions of each medicine it contains. However, many tablets look similar and when present in the same compartment they can be difficult to distinguish. This can lead to disempowerment of patients and carers eg if they are choosing not to take a medicine at a specific time for lifestyle reasons, such as a diuretic.
How do you ensure the patients have access Patient Information Leaflets if their medication is supplied in MCA?	When medicines are dispensed into an MCA, it remains a legal requirement that a patient information leaflet (PIL) is supplied for every dispensed medicinal product included.
What is the expiry date of medication in MCAs?	There is a lack of published data to demonstrate the stability of medicines in MCA which could be used to determine appropriate expiry dates. In the absence of applicable data and in order to support practice, the Royal Pharmaceutical Society recommends a maximum interim expiry date of eight weeks for products in sealed MCA . It should be recognised that there may be circumstances where an expiry date of less than eight weeks is used for a product in a sealed MCA if this is recommended by the medicines

manufacturer or indicated by published scientific studies. With regard to **unsealed MCA**, it has been common practice since 1987 to store medicines in daily dose reminders for up to **seven days**. This seven day expiry date for unsealed MCA is an arbitrary timescale that reflects practice. There will be medicines that have specific stability issues where the appropriate expiry date is shorter than the suggested seven days

Appendix 1: Contact Assessment Form

Patient's Name..... Name of Usual Pharmacy:

NHS No.....Date.....

You should ask the patient 'Why do you think that you need support to help take or use your medicines?'

Consider the patient's physical and mental condition. Summarise your initial assessment in the table below.

Summary of risk areas				
Cognitive (Muddled or confused)				
Sensory (e.g. sight, touch)				
Physical (co-ordination, tremor etc.)				
Could the condition possibly last at least a year and/or the rest of their life, and/or re-occur?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Are any medicines supposed to be taken more than twice a day?	Yes <input type="checkbox"/> No <input type="checkbox"/>			
How many different kinds of medicines are taken or used most days? (Include pain killers, indigestion remedies, but not herbal, alternative or complimentary therapies unless consider essential by patient)	Prescribed	Purchased		
	Regular	When required	Regular	When required

Problems with day-to-day medicine related activities?	Yes	No
Getting a supply of medicines before they run out?	<input type="checkbox"/>	<input type="checkbox"/>
Taking or using medicines?	<input type="checkbox"/>	<input type="checkbox"/>
Remembering to take medicines?	<input type="checkbox"/>	<input type="checkbox"/>

DDA does not apply	<input type="checkbox"/>	Actions	Signposting <input type="checkbox"/>	Purchase <input type="checkbox"/>
DDA applies, self-assessment form provided	<input type="checkbox"/>	Date of self-assessment form returned/...../.....	Date pharmacy assessment completed/...../.....	

Patient's signature

Completed by.....Name Signature

Appendix 2: Compliance self-assessment Form (to be filled in by patient or carer)

Instructions: This form can be completed in your own home or anywhere that you feel is appropriate. You may ask family members, carers or the pharmacy staff to support you. Complete as much of the form as you can. Fill in the spaces or insert a next to your answer.

<i>Think about your tablets, capsules, liquids, creams, inhalers and other types of medicines</i>	Yes	No
Do you have any routines to help you remember take or use your medicines?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have any problems with opening or closing medicine containers?	<input type="checkbox"/>	<input type="checkbox"/>
Do you have any problems getting medicines out of containers?	<input type="checkbox"/>	<input type="checkbox"/>
Do you take or use all of your medicines according to the instructions?	<input type="checkbox"/>	<input type="checkbox"/>
Can you take or use all of your medicines (e.g. swallowing, using drops/inhalers)	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that some of your medicines are more helpful than others?	<input type="checkbox"/>	<input type="checkbox"/>

	Number
How many of your prescribed medicines are supposed to be taken or used only when you need them?	
How many herbal, vitamins, homeopathic, complementary or similar types of remedies that you buy do you take most days?	

<i>Think about your prescribed medicines only</i>	Yes	No
Do you vary the way that you take your medicines?	<input type="checkbox"/>	<input type="checkbox"/>
Do you know what you take your medicines for?	<input type="checkbox"/>	<input type="checkbox"/>
Do you sometimes forget to take your medicines?	<input type="checkbox"/>	<input type="checkbox"/>

	Yes	No
Does anyone help you manage daily tasks (e.g. washing) who could give you more help managing your medicines?	<input type="checkbox"/>	<input type="checkbox"/>
Could the instructions on your medicines be improved to help you manage them better?	<input type="checkbox"/>	<input type="checkbox"/>
Do you think that some of your medicines could work better?	<input type="checkbox"/>	<input type="checkbox"/>

Additional information.

Signature.....

Date.....

When you have completed this form return it to the pharmacy

Appendix 3: Assessment form for use by pharmacy

Person's name		Date of assessment	 dd/... .. mm /.... ..	
NHS number		Is a carer present?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
AddressPost code.....		How many regular carers provide support?		Paid	
				Unpaid	
Tel. Number		Name of Carer (s) and contact details:			
Date of birth					
Preferred spoken language		Who organises the ordering of your of prescriptions:			
GP's name					
Date of last medicines use review		Telephone number.....			
...../... .. /.... ..					
What pharmacy services are currently provided?		Number of dose alterations made in the past three months (use PMR)			
		Is there evidence of non-compliance in pharmacy PMR?		Yes <input type="checkbox"/> No <input type="checkbox"/>	

If possible, complete the times a day that a carer visits you							
	Monday	Tuesday	Wednes day	Thursd ay	Friday	Satur day	Sunda y

Morning							
Mid-day							
Night							
Who do you give authority for the assessor to contact?					<input type="checkbox"/> GP	<input type="checkbox"/> Carer	
Others, please state							

Coping routines			
	Currently using	Could be useful	Patient does not think this will help
Simple routine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tick chart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MAR Chart	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Purchased compliance aid	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paid carer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Family/friend support	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MDS system supplied by a pharmacy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Summary of action plan agreed			

Medicine containers (Consider opening AND closing)	Problem area		Additional information
	Yes	No	
Boxes	<input type="checkbox"/>	<input type="checkbox"/>	
Blister packs	<input type="checkbox"/>	<input type="checkbox"/>	
Tablet or capsule bottles	<input type="checkbox"/>	<input type="checkbox"/>	
Screw lids	<input type="checkbox"/>	<input type="checkbox"/>	
CRC lids	<input type="checkbox"/>	<input type="checkbox"/>	
Winged lids	<input type="checkbox"/>	<input type="checkbox"/>	

Liquid bottles	<input type="checkbox"/>	<input type="checkbox"/>	
Squeezable tubes	<input type="checkbox"/>	<input type="checkbox"/>	
Purchased compliance aid	<input type="checkbox"/>	<input type="checkbox"/>	
Pharmacy supplied compliance aid	<input type="checkbox"/>	<input type="checkbox"/>	
Summary of action plan agreed			

Taking or using medicines	Problem area		Additional information
	Yes	No	
Non-soluble tablets	<input type="checkbox"/>	<input type="checkbox"/>	
Soluble tablets	<input type="checkbox"/>	<input type="checkbox"/>	
Chewed or crushed tablets	<input type="checkbox"/>	<input type="checkbox"/>	
Capsules	<input type="checkbox"/>	<input type="checkbox"/>	
Liquid medicines			
5 ml spoon	<input type="checkbox"/>	<input type="checkbox"/>	
20 ml cup	<input type="checkbox"/>	<input type="checkbox"/>	
Oral syringe	<input type="checkbox"/>	<input type="checkbox"/>	
Creams/ointments	<input type="checkbox"/>	<input type="checkbox"/>	
Inhalers	<input type="checkbox"/>	<input type="checkbox"/>	
Ear/eye/nose Drops	<input type="checkbox"/>	<input type="checkbox"/>	
Suppositories or pessaries	<input type="checkbox"/>	<input type="checkbox"/>	
Other	<input type="checkbox"/>	<input type="checkbox"/>	
Summary of action plan agreed			

Taking medicines according to the instructions

	Problem area		Additional information
	Yes	No	
Reading instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Understanding instructions	<input type="checkbox"/>	<input type="checkbox"/>	
Understanding symbol chart	<input type="checkbox"/>	<input type="checkbox"/>	
Generally forgetful	<input type="checkbox"/>	<input type="checkbox"/>	
The number of prescribed items	<input type="checkbox"/>	<input type="checkbox"/>	
The number of PRN prescribed items	<input type="checkbox"/>	<input type="checkbox"/>	
The number of complementary and alternative medicines	<input type="checkbox"/>	<input type="checkbox"/>	
Medicines similar in appearance	<input type="checkbox"/>	<input type="checkbox"/>	
Medicines varying in appearance from one prescription supply to another	<input type="checkbox"/>	<input type="checkbox"/>	
Lack of understanding of the reason for taking medicine	<input type="checkbox"/>	<input type="checkbox"/>	

Summary of action plan agreed

Summary Form

Compliance aid assessment review for...../NHS No.....

Patient's GP

Summary of risk areas	Assessed risk level			'Practical solution', sign-posting or aid provided to support compliance
	High	Medium	Low	
Coping routine	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Getting medicines out of containers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Swallowing or using medicines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Following instructions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Intentional non-compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Confusion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sensory problems (e.g. sight)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Physical problems (e.g. tremor)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Carer's activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
The following MDS has been supplied.....				
Outline of intervention required				

	Yes	No	Completed by	Date dd/mm/yy
Action plan agreed with patient	<input type="checkbox"/>	<input type="checkbox"/>	/...../.....
Carer informed	<input type="checkbox"/>	<input type="checkbox"/>	/...../.....
GP informed, no intervention required	<input type="checkbox"/>	<input type="checkbox"/>	/...../.....
GP informed, an intervention is required	<input type="checkbox"/>	<input type="checkbox"/>		
Referred for	<input type="checkbox"/>	<input type="checkbox"/>	/...../.....

Pharmacists Name (IN CAPITALS).....

RPSGB Registration number.....

Pharmacist's Signature.....

Date dd/..... mm /..... yy

Next review date dd/..... mm /..... yy

Pharmacy stamp