

Frequently Asked Questions (FAQ) on the use of Multi compartment compliance aids (MCAs) in the community: A resource for community pharmacists and other health and social care professionals involved in medicines management for older people

Introduction and considerations

This document attempts to answer some of the commonly asked questions about MCAs. Please note that

- Many of the points made in this document reflect the views of the author based on own experience and interpretation of guidance.
- The FAQ is designed with older people in mind and though the principles may be similar, it will have to be adapted for use in children and younger adults.
- Only the courts of law can make a final decision on any issues regarding the Disability Discrimination Act (DDA) 1995 and 2005.
- An assessment tool can help in decision making but will not cover all eventualities in relation to disability, medicines management needs or interventions to support patient

Whenever a pharmacist dispenses a drug they must take responsibility to ensure that they comply with legislation and best practice. This includes dispensing in MCAs.

The Drug Tariff (a legal document for NHS pharmacy contractors) states that they shall supply in a **suitable container** any drug which they are required to supply under Part II of Schedule 2 to the Regulations. Usually this means capsules, tablets, pills, etc should be supplied in airtight containers of glass, aluminium or rigid plastics; card containers may be used only for foil/strip packed tablets etc. Although there is no legislative requirement, each container should meet British Standards (BS) specification regarding moisture and light sensitivity in order to preserve the medication (most MCAs have not been tested. A container fee is paid at the average rate of 3.24p per prescription for every prescription supplied (except for oxygen)

If following an assessment and in the best interest of the patient due to specific reasons the pharmacist has made a decision to deviate from using these standard containers, the reasons why should be clearly documented in the patient's record or care plan. The pharmacist must then ensure that the necessary measures are put in place to ensure the safe handling or use of those medicines.

1. What are MCAs?

MCAs or monitored dosage systems (MDS) are the terms used to describe a range of medicines storage devices divided into compartments to simplify the administration of **solid oral medication**. They were designed to make it more convenient for the patient who is self administering to manage their medicines and act as a visual reminder as to whether the drugs have been taken or not. When used appropriately in a selected group of older people they can promote independence and facilitate adherence to taking medicines.

There are many types ranging from simple to complex systems with alarms and automated dispensing devices. They usually have capacity for 7 or 28 days medication at a time. The most common types are the Boots MDS®, Nomad®, Dossette®, Medidos® and 7-day Venalink® systems.

Some require the use of heat to seal the tablets in each compartment so are not compatible with heat or moisture sensitive drugs. Some are disposable and others re-usable (must be cleaned regularly to avoid cross contamination). Some have enough space to attach the medicines label others have not so provision must be made for each tablet dispensed in the MCA to be identifiable at all times. The medicines in the MCA are enclosed in compartments with a transparent clear covering which makes them unsuitable to store light sensitive drugs over a long period of time compared with the standard amber- coloured dispensing containers. Due to tests carried out on moisture permeability in 1993, the Pharmaceutical Society states that medicines should not be left in sealed MCAs for longer than **8 weeks**, after which they must be returned to the pharmacy for disposal¹.

2. What is the scale of use

¹ Council Guidance. Monitored dosage systems. *Pharmaceutical Journal* 1994; **253**:881.

Nationally, the use of MCAs is increasing despite the little evidence to support their effectiveness. A study in 2001 suggested that about 100,000 people living independently in the community in the UK use MCAs². Pressures on the community pharmacist to fill these devices as well as the associated workload are also on the increase. A survey done with Lambeth Social Services and the two main domiciliary care providers in the North and SE localities showed that 94.5% of the 338 older people receiving medicine support were using MCAs. In addition Lambeth community nurses gave 705 MCAs to patients between April 08 and Mar 09.

3. What are the main drivers of MCAs use

In Lambeth NHS

- Social services and domiciliary care providers
- Care homes (with and without nursing)
- Lambeth supported discharge team and rapid response team
- Lambeth community nurses, GPs and community pharmacists
- Patients, carers and family

Many health and social care staff as well as patients and carers perceive that the MCA is a safe way for carers to administer or support patients to take their medicines and also that the law requires them to do so. This is a misconception (See 6 & 7 below) and there have been guidance produced by regulators and professional bodies that emphasize that adequate training and documentation are far more important in ensuring safe handling of medicines.

The Nunney et al study found MCAs are popular with patients, many who may be unwilling to change to other devices once started². However local experience has also found older people given MCAs who would prefer to and can manage with standard containers. This confirms that a robust assessment and regular follow up is essential.

4. What are the benefits of using MCAs?

MCAs are designed for the convenience of patients rather than the safety or convenience of trained carers.

- They help simplify the drug regimen and provide a convenient way for patients to take their medicines
- They act as a visual reminder to prompt the patient to take their medicines
- They may help to promote or maintain independence

5. What groups of older people are likely to benefit from MCAs?

- Those who are motivated and willing to take their medicines and possess certain visual and dexterity skills in order to manipulate the devices. MCAs do not address intentional non adherence. Although it could be helpful in those who forget to take their medicines, there has to be some level of cognition e.g. a patient with dementia needs to know its lunchtime in order for him/her to take their lunchtime medicine. Unfortunately this level cannot be measured objectively and relies on subjective assessment. The Nunney study showed that 50% of patients on MCAs could manage their medicines in standard containers following a subjective assessment by the research pharmacist.
- Those taking mainly oral formulations
- Those whose medicines are stable and does not change frequently. Careful consideration must be given to how any changes that the prescriber makes can be dealt with promptly by the supplying pharmacy.
- Those taking many tablets and where sorting them into individual compartments may help to simplify the medication regime. Note that it is better to first attempt to simplify and or rationalise the number and frequency of drugs to reduce polypharmacy by carrying out a thorough review of medicines

MCAs should not be considered as a life long solution to support the older person but must be reviewed and monitored frequently in light of their changing circumstances

6. What are the problems involved with using MCAs?

² Nunney et al. how are MCAs used in primary care. PJ 2001; 267:784-789

- They can only be used to store **some oral solid medications**. A Glasgow study showed that 46% of 264 patients on MCAs were taken additional oral medication outside the MCA³. Many older people will be running at least two medication systems as they would be taking other medicines which cannot be stored in the MCA e.g. inhalers, liquid preparations and “as needed”. A patient must be assessed to check that they can manage two systems otherwise it could further complicate adherence. There is local evidence to show that acute antibiotics, liquids and inhalers are being missed out by carers because they are not in the MCA.
- Individual drugs are not labelled so inability to identify specific medicines may affect decision making in terms of whether to take or not.⇒ Disempowers the patient. Also other HCP may be unable to identify the drugs e.g. on admission to hospital or care home so can not be used for medicines reconciliation.
- Wastage and increase in cost due to short half life in MCA. Also if there are any changes to one medication, all will have to be retrieved and destroyed.
- Some devices (e.g. Medidose, Nomad, Dossette) are not tamper proof which could increase the risks of drug errors if drugs are intentionally or non-intentionally moved from one compartment to another by patient or others
- They are not child proof and so do not meet the legal requirements regarding child resistant containers
- The large numbers of people using MDS has led to an unmanageable workload for GPs and community pharmacists and an increase in drug incidents and errors. Lambeth NHS incident reporting system shows that a high number of drug errors/incidents relate to the use of MCAs. Limiting the numbers to those who have a genuine need via assessments will reduce such workload and associated risks and be more manageable for the PCT to fund.
- The pressure on community pharmacist to provide MCAs sometimes leads to inter- professional disputes, tension and strained relationships

7. Are there specific drugs that should not be dispensed in an MCA?

Many drugs have not been specifically tested for stability in MCAs, however the general guidance is that they should not be stored in the MCA for longer than 8 weeks. Some medicines are unsuitable for dispensing in MCAs. Based on published and unpublished data, a PJ article in 2006 suggested that the following solid drugs should not be dispensed into MCAs⁴

- Medicines that are sensitive to moisture, e.g. effervescent tablets, soluble products, buccal and mucosal products, significantly hygroscopic products
- Light-sensitive medicines, e.g. chlorpromazine
- Medicines to be refrigerated
- Medicines that may be harmful when handled, e.g. cytotoxics like methotrexate

The Royal Pharmaceutical society adds a few other categories

- 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 (also NPSA)

There is a more detailed compilation of over 400 specific drugs showing which drugs should not be dispensed in MCAs and those where caution should be exercised. The document can be accessed at http://www.bolton.nhs.uk/Library/services/med_manage/StabilityofDrugsinComplianceAids.pdf

Also there may be safety issues for medicines where the individual drug must be identified to allow the patient to follow specific administration instructions e.g. alendronate, aspirin, strontium. The dispensing pharmacist must take steps to ensure that the patient is able to identify the tablet in the MCA to enable them follow these instructions.

³ Campbell A et al. Glasgow pharmacy audit program. Use of multi-compartment compliance aids within a local health care- co-operative

⁴ Church C, Smith J. How stable are medicines moved form original packs into compliance aids?. Pharmaceutical Journal2006; **276**;75-76

8. What is the research or evidence base on the use of MCAs?

- NICE adherence guideline 2009- emphasises that involving patients in the decision making process (concordance) about medicines and tackling intentional and non intentional non adherence is the main way to improve medicines taking. It recommends that specific interventions such as MCAs should only used where it has been agreed that it would address a specific patient problem. It states that despite their frequent use, the evidence is not strong enough to recommend the widespread use of MCAs.
- University of East Anglia report 2005⁵- there is limited research evidence to show the benefits of MCAs and current assessment techniques may be inadequate for accurately identifying patients who need MCAs
- The Leeds study 2001²- overuse of MCAs in primary care without proper assessments. The initiation and subsequent choice of MCA focus mainly on the needs of carers and professionals. Popularity among patients with majority expressing the need for a system to help them remember to take their medicines although about 39% of patients had difficulties opening the device
- CHUMS project⁶- showed a higher risk of drug errors/incidents in care homes (with nursing) that used the unsealed MCAs compared with the sealed unit dose systems. Also an increase in dispensing errors where MCAs were used compared to standard containers.

9. What is the legislative and ethical framework on using MCAs?

The same legal requirements around labelling (See RPSGB Factsheet 6), dispensing, supply, administering etc are the same irrespective of whether medicines are dispensed in MCAs or standard containers. They should only be dispensed against a valid prescription except in the case of an emergency supply. The label must reflect the date the medicine was dispensed. The drug in the MCA must be clearly identifiable by the patient or whoever administers the medication e.g. by using tablet identifiers.

The Code of Ethics requires all solid and liquid (oral and external) preparations to be dispensed in a re-sealable child resistant container unless:

- The medicine is in an original pack or patient pack such as to make this inadvisable;
- The patient has difficulty in opening a child-resistant container;
- A specific request is made that the product shall not be dispensed in a child-resistant container
- No suitable child-resistant container exists for a particular liquid preparation or
- The patient has been **assessed** as requiring a compliance aid.

A breach of these requirements could give rise to a complaint of professional misconduct.

Best practice would require a pharmacist to have an SOP for dispensing or supplying medicines in MDS which includes the procedures for repeat dispensing, ordering, collection and delivery services as provided

10. Is it true that carers can only give medicines to patients from an MCA?

- No - The law is the same as for medicines dispensed in standard containers and MCAs and is covered by the Medicines Act 1968⇒ **Anyone acting under the directions of a prescriber, with the patient's consent can give medicines.** In the case of domiciliary care workers they must be trained and competent in the administration of medicines before they can give medicines at all.

11. Is a community pharmacist obliged to dispense medicines in an MCA?

No they are not. The NHS does not fund pharmacists to dispense medicines in MCAs or supply them free of charge. However following an assessment of a patient who cannot manage their medicines and meets the DDA criteria, the **pharmacist** may decide that an MCA is a "reasonable adjustment" to make to ensure that the patient is supported to take their medicines. In that case they are obliged to supply one. It is worth noting that MCAs are not the only intervention to support medicines management and the pharmacist may suggest others to meet the patients need.

The pharmacist is under no obligation to provide MCA to a patient who does not fit the DDA criteria unless they are part of a local scheme that funds the MCAs

⁵ Bhattacharya D. indications for multi-compartment compliance aids (MCAs) also known as monitored dosage systems (MDS) provision

⁶ School of pharmacy, University of Leeds, University of Surrey. Aldred et al. Care homes use of medicines study 2007.

12. Who should pay for an MCA?

The NHS does not fund pharmacists to supply MCAs free of charge. Some pharmacists may ask patients to pay for the device with or without a charge for dispensing, others may supply and dispense without charge out of good will or as part of a local service funded by the NHS. It is a purely commercial decision and the community pharmacist is free to make their own decision. However where a decision is made to dispense in an MCA, they are obliged to ensure that processes and procedures are in place to ensure that legal as well as contractual requirements are met and patient safety paramount as with other dispensed medicines.

It is worth mentioning that the routine use of 7 day prescriptions to fund MCAs is not recommended from an NHS perspective. GPs working within the NHS are bound by the NHS regulatory system. The PSNC and the General Practitioners Committee (GPC) support this view. However some patients may need to have their medicines dispensed every 7 days to maintain independence or for safety reasons in standard containers or MCAs. For example those with learning disabilities who are stabilised on antipsychotic medication, circumstances where a limited quantity of medicines should be given for safety reasons e.g. to avoid overdose

The GPC advises that GPs should resist demands to prescribe for 7 days unless there is a clinical reason⁷ to do so. A few PCTs view it that if there is no assessment to back the writing of 7 days script it is potentially illegal to use it to fund MCA dispensing/. Others believe that it is a use of NHS resources to fund a non NHS purpose

There could be other patients who do not meet the DDA criteria who may benefit from receiving support with their medicines including MCAs- PCTs should identify those patients and provide adequate funding to meet their needs to improve adherence/ medicines taking. E.g. Haleraid® is not available on NHS prescription and ideally should be provided by PCTs for those patients who may benefit from using it. Also if within the DDA requirements the pharmacist has to make an adjustment that is not considered “reasonable” it is the PCTs responsibility to provide support for those patients by commissioning the appropriate services

13. Where can I get an MCA?

- Community pharmacies (there may be a charge)
- Can be bought from “Aids to daily living” catalogues, direct mail order companies and other shops
- In Lambeth NHS, community nurses give MCAs free of charge

14. What is the most suitable type of MCA?

The most suitable device will depend on the patient circumstance. Patients should be offered a range of MCAs to find out which is the best for them. This should be trialled for a short period to ascertain whether it meets their needs and then monitored regularly. E.g. whether a 7 or 28 day pack is suitable, whether they have the dexterity to manipulate or get the drugs out of the device

15. What other methods are available to support older people who have difficulty taking their medicines, apart from MCAs?

There are many other options but first a thorough assessment should be done with the patient to find out the problems with taking medicines and the most appropriate intervention to meet that need. Many PCTs have developed assessment tools though a few if any are validated. For community pharmacists an MUR is a useful way of doing this. Examples include

- Reminder charts help to simplify and remind patients about what, when, why and how to take their medicines

⁷ GPC information and guidance on prescribing in general practice sep 2004

- Simple reminders on the fridge door, a favourite TV program, daily routine activities, the news, an alarm clock, mobile phone, a call from friends and relatives may be sufficient to prompt the patient to take their medication.
- Pictograms, colours, codes, large labels, magnifying glass and charts may help those who cannot read the labels to take their medicines
- Domiciliary care workers, family and friends can be involved in providing support- the NSF for older people identified that informal carers are an untapped resource to support older people to manage their medicines
- Often older people will have their own bespoke systems to manage their medicines and it may be best to work with them to make those systems as safe as possible rather than introduce new systems that are complex and confusing to them
- The NPA, RNIB, Age Concern, Primary Care Contracting have examples of a range of practical solutions to help people with taking medicines that are accessible on the various websites. Also many PCTs have developed their own resources. Good examples include the East Sussex & Weald PCT “Self Care Auxillary Aids” booklet (contact Christina.short@esdwpct.nhs.uk), the Lambeth NHS “Medicines support grid” (contact Lelly.oboh@lambethpct.nhs.uk)

16. Who currently fills medicines into an MCA?

- A dispensing pharmacist is legally allowed to dispense medicines into an MCA.
- Nurses- the UKCC strongly advises nurses against this as it constitutes secondary dispensing with all its associated risks. However where a nurse undertakes this role they must be able to dispense to the same standard as is expected of a community pharmacist and take full responsibility and liability
- Domiciliary care workers should not undertake this task as the risks of error is too great and they become liable
- Care workers looking after those with learning disabilities sometimes fill 7-day MCAs from the original containers dispensed by the pharmacist
- Relatives and friends – but they take responsibility

Where in exceptional cases a non pharmacist fills medicines into an MCA there should be robust risk assessment and written procedures that includes which staff permitted to do this, what containers the medicines are to be put in, how the containers are to be labelled and what other information is to be given.

17. Why won't the PCT fund pharmacists to provide MCAs to all patients in the current situation?

There is no evidence that MCAs are safer and little evidence to prove that it improves adherence to medicines taking. The evaluation of a previous scheme in Lambeth NHS (1999) showed no benefits. However, the long term plan is to fund pharmacists to provide support over and above their “normal dispensing responsibilities” to older people who have been identified following assessment as having medicines management needs. The funding will cover a range of services or interventions, not just MCAs. In order to ensure affordability, capacity, consistency, quality and deliver a safe service, further discussions and systems need to be in place

- The current use of MCAs must be rationalised to ensure that only those who have a genuine need will be eligible for the service.
- Consideration must be given to the true time and resource commitment needed to provide a safe and efficient service which includes an assessment, regular monitoring, providing the right device, information and advice.
- Development of a standard assessment tool agreed across the social and health economy to identify those who need support
- Development of a local enhanced service with an SLA in place to monitor benefits and performance as well as ensure adequate remuneration for the service is needed