Monitored Dosage Systems Discussion paper

NHS England and NHS Improvement

South East and South West Regions (Wessex)

Monitored Dosage Systems - Discussion paper

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Developed and written by: Laura Harris, Programme Manager

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Executive Summary

This paper has been commissioned by the Wessex Pharmacy Local Professional Network as over recent years there has been an increase in the use of Monitored Dosage Systems (MDS). This paper is a tool to aid discussion about what health and social care in the Wessex area needs to do jointly in relation to the use of MDS, to ensure best patient care and safety.

National guidance from the National Institute for Health and Care Excellence (NICE) and the Royal Pharmaceutical Society (RPS) states:

- An MDS is just one of a range of options which should be considered when making reasonable adjustments
- The use of original packs of medicines with appropriate support is the preferred option for supplying medicines to patients
- Patients should be assessed for the need for an MDS or an alternative strategy
- If using an MDS, medication should be removed from its original strip or blister packaging
- When dispensing medication in an MDS, a description of the appearance of each individual medicine supplied should be included
- The patient should have an up-to-date patient information leaflet for each prescribed medicine
- If a patient is receiving social care, the provider should ensure there is a safe storage place or cupboard for storing medicines, including those supplied in an MDS

Feedback from interviews indicate that guidance is often not adhered to, with the two main reasons for issuing an MDS being a patient having memory problems and/or having several tablets to take. There is also a belief that carers, providing paid domiciliary care, would often not help or remind a person to take medication unless it was in an MDS.

Alternatives do exist, these include reminders on phones, clocks and other devices, medicines administration record charts, large labels and devices to help remove medication from packaging.

Similar findings have been identified by groups in other areas of the country who are also considering what they need to do and how. This paper has been written to support the discussion on what, if anything needs to change in the Wessex area.

Wessex Pharmacy Local Professional Network is seeking discussion and responses to the following questions:

1. Is change needed?
    a. What would good use of MDS in Wessex look like?

2. What change is needed?
    a. How do we implement current guidance?
    b. Are there specific messages for stakeholders?

3. Who can make the changes happen?
    a. How can we make sure the changes are sustainable?
    b. How will the changes enhance patient care and medicines?

4. How can we ensure the changes happen?

Contents

1. Purpose

This paper provides details on the current use and guidance of Monitored Dosage Systems (MDS), alternative systems for consideration and questions for stakeholders in the Wessex area to consider.

In current health and care provision the Wessex area covers Hampshire, Dorset and the Isle of Wight.

This paper focuses on the use of MDS in the patient's own home, which can include when the patient is receiving domiciliary care. It does not cover the use of MDS in care homes.

The Wessex Pharmacy Local Professional Network intends this paper to be a tool to aid discussion about what, health and social care in the Wessex area need to jointly do in relation to the use of MDS, to ensure best patient care and safety.

2. Background

Monitored dosage systems (MDS), also known as multi-compartment compliance aids (MCCAs or MCA), multiple dosage systems, dosette boxes and blister packs, are medicine storage devices with compartments divided into days of the week and various times of each day. They are prepared by a pharmacy and medication is sealed in before being issued to a patient.

MDS are widely used, and whilst there are situations where MDS have benefits for an individual, the NICE 2017 endorsed position is that keeping medicines in their original containers is the preferred approach.

Over recent years there has been an increase in the use of MDS, with demand now becoming increasingly difficult to meet. Alternative interventions, which in some cases can be more effective in supporting people to take their medicines, are often not considered.

Whilst the use of MDS might be helpful for people who struggle to get medicines out of their original packaging or have a visual impairment, there is little research evidence demonstrating that MDS can help improve the taking of medicines[1].

Some of the large pharmacy chains are changing their policy and procedures on issuing MDS, as such this has provoked reactions from the wider pharmacy network, patients, relatives and carers.

To support well informed decisions and aid consideration of the best options for individual patients, this paper provides an overview of national guidance and regulations and looks at what alternatives are available.

[1] Duerden, M. (2018). What is the place for monitored dosage systems. *Drug and Therapeutics Bulletin, 56*(9), 102-106. Retrieved 4 18, 2019, from https://dtb.bmj.com/content/56/9/102

3. Creation of this paper

This paper has been commissioned by the Wessex Pharmacy Local Professional Network as over recent years there has been a perceived increase in the use of Monitored Dosage Systems (MDS) in the Wessex area.

To oversee the creation of this paper a small group of health and social care colleagues was established. The group included representation from domiciliary care providers, pharmacies in both secondary and community settings, general practice and health and social care commissioners.

Appendix A provides full details of members.

To develop this paper a review of recent literature from 2015 onwards was conducted in April 2019. Additionally, national guidance and regulations have been reviewed as detailed in section 5. This was to establish the evidence of best practice relating to the use of MDS.

To establish the current situation within the Wessex area semi-structured interviews were held with a selection of dispensing practitioners and people who support individuals taking medications. Further details are provided in Section 4. Stakeholder views and opinions of MDS.

Additionally, health and social networks were explored to identify other current work relating to the use of MDS.

The author of this paper has a background in programme and project management and no previous experience of MDS or work in this specific area. It is felt that this experience has maintained an unbiased focus in the development of the paper.

4. Stakeholder views and opinions of MDS

Semi-structured interviews were held with ten people during June, July and August 2019, to gain an understanding of views and opinions on the use of MDS in the Wessex area, beyond those sitting on the oversight group.

- The daughter of a patient with multiple health issues including vascular dementia, a heart issue and arthritis.
- A volunteer befriender who is friends with someone who has dementia.
- A carer who is also a member of a support group for carers.
- A small village dispensing GP where lots of patients live alone with very little family support.
- A GP based in a practice where the population is growing due to lots of new houses being built.
- Two hospital-based pharmacists employed by different Trusts.
- An independent community pharmacy owner in a rural area with a high elderly population.

- A community pharmacist based in a large town centre and employed by a large pharmacy chain.
- A Care Quality Commission (CQC) medicines manager.

Interviews were held to gain views beyond the oversight group. This paper has been created to open further discussion and gain wider feedback.

Wider engagement through the Wessex area will be through the discussion of this paper at various forums during the latter part of 2019.

All interviews were held over the telephone, however face-to-face meetings at a time and date convenient for those being interviewed were offered. The interviews covered these topics:

Responses have been detailed below under these topics except for awareness of risks, issues and mistakes. This has been included in the section 7, Risks and Concerns of using an MDS.

4.1 Why is an MDS used or issued?

The interviews identified two main reasons for issuing an MDS: memory problems and having several tablets to take. However, a pharmacist pointed out an MDS is only helpful is cases where memory issues are mild.

> If they have more than one tray they get confused…..a confused patient can still open the wrong day or time on a dosette box.

Each interviewee said an MDS was issued at the request of a relative or carer. On probing further, each person interviewed said they were aware that carers, providing paid domiciliary care, would often not help a person take medication unless it was in an MDS.

Both hospital pharmacists said they have issued an MDS, when they felt they were not needed, to avoid delayed discharges, because care providers would not accept a patient without one.

They also stated that the number of patients being admitted to hospital with an MDS has dramatically increased in recent years, with one wondering if they had the capacity to continue providing MDS on discharge and thinking that it might end up being a service which they have to outsource.

The GP said they were aware of carers and relatives often asking for medication to be dispensed in an MDS as they felt it would help with compliance.

Other reasons for issuing an MDS were if a patient had sight problems or learning disabilities.

When issuing MDS from hospitals the pharmacists stated it was routine for a week's worth of medications to be dispensed; the patients would then be expected to have their medications dispensed by a community pharmacist.

4.2 What assessments are carried out?

Only one of the six pharmacists and GPs interviewed said they followed a clear assessment when issuing an MDS for the first time to a patient; this was one of the hospital pharmacists.

> We use an assessment tool, a form, it was created in conjunction with the stroke service some years ago and could probably do with being refreshed.
>
> We don't retrospectively assess patients, if they come in with one then they are likely to go home with one, unless it's just for a couple of vitamins or something, then we will assess.
>
> If we do an assessment which identifies that the patient does not need an MDS or there is a more suitable alternative, then it is easier to push back on challenges from social care teams.

Those interviewed seemed to find it difficult to describe the assessment, this is probably because there is no nationally approved guidance, processes described were informal with no records kept, except for the above hospital pharmacist.

If staff on the ward say a patient cannot be discharged without an MDS, and an assessment indicates no need for an MDS, I'll ask for the cost code to bill to, this usually stops further questions.

The Dispensing GP said they would seek verbal consent from the patient however, an assessment form could be a place to record consent and referred to if their decision was questioned. They would therefore appreciate a standard assessment form if one was available.

When asked, the daughter of a patient with multiple heath issues wasn't sure if an assessment had been carried out or not, or who it should have been carried out by. On further questioning it became clear that the pharmacist had not seen her mother to complete an assessment. The daughter stated…

> I'd been putting my mother's medications into a dosette boxes myself. Looking after and caring for my mother was becoming increasingly difficult, it was only when she was admitted to hospital that she was assessed for home care and it was social services who told me about the service provided by pharmacies. I just called into my chemist and asked them, it was very easy, no questions, they just made up my mother's repeat prescription using their dosette box system.

Both community pharmacists said they received up to two or three phone calls a day mainly from relatives asking for an MDS to be issued. As the independent pharmacist did not have capacity they would not take on any additional patients and had therefore not carried out an assessment for some time. The large chain employed pharmacist did not have a standard assessment process and commented…

> It can be difficult to know if the patient needs them, we often rely on the GP notifying us that the patient has memory problems.

The GP said that they would expect the pharmacist to assess the patient to see if they needed support with taking medication they had prescribed. However, they felt that an MDS would not be suitable for very arthritic patients as they would still have difficulty opening the compartments, or those with advanced dementia as they could get confused as to what day or time it is.

They would also expect the pharmacist to flag polypharmacy issues where a patient was taking excessive medication and a review had indicated that a reduction might assist them in coping with taking their medication

4.3 What guidance is available or known about?

The knowledge of what guidance is available was extremely variable. With the community pharmacist for a large chain completely relying on all guidance being provided in the form of Standard Operating Procedures (SOPs) from head office.

The two hospital pharmacists were aware of guidance being available from the Royal Pharmaceutical Society (RPS), however it was felt that much of it was not relevant to hospitals. Neither were aware of the Quality and Productivity case study Taunton and Somerset NHS Foundation Trust provided for NICE in 2016.

The GP said they would liaise with the pharmacy technician associated with the practice should they need to know about guidance relating to MDS.

The CQC medicines manager was able to provide direction to relevant NICE guidance which relates to patients taking medications appropriately and is considered when inspections are carried out.

4.4 What checks are followed?

Each of the pharmacists interviewed stated how time consuming creating an MDS is, they each have their own way of checking, double checking and in some cases, triple checking the MDS. There is no standardised way for checking the MDS has been created correctly.

The daughter was not aware if any checks were routinely carried out by those caring for her mother, although she did know of an incident where one compartment contained a double dose of a vitamin pill. She was not sure if it was her mother or the carer who identified the mistake. As it was a vitamin, not other medication, the issue was not reported.

The independent community pharmacist and dispensing GP described how drivers delivering the MDSs could check if a patient had taken all their medication by picking up the empty boxes. This wasn't routine practice though.

> I don't routinely receive back old ones when issuing a new one. There are patients however when I've insisted that they do return them. I have had reports from delivery drivers saying there seems to be a big pile of unwanted/unused medications. At times like this I'll offer to go and tidy up or collect the medicine, I'll check if a medication is being avoided and raise with the GP.

4.5 Likes and Dislikes

The main reason the pharmacists and GPs liked MDSs was because they felt in some cases they were the most appropriate aid for patients and did help them to take their medications.

There were mixed views on medicines being wasted, with the volunteer befriender feeling medication was likely to be left when it was in its original packing.

> Before my friend started with the blister pack he often wasn't sure if he had taken his medication that morning. Sometimes he thought he might have already taken it when he hadn't. He also couldn't be bothered opening various packs of medication as it was time consuming so would sometime miss taking it altogether. I like the blister pack as my friend can clearly see if he's had the medication and stops him fretting about all the different packets.

The pharmacists and dispensing GP recognised that if a patient's prescription changed then a months' worth of medication could be wasted if they were not using a 7-day script. They explained that all the medication in an incorrect MDS would have to be disposed of and a new MDS created. If original packaging was used adjustments were easier to make.

The carer felt there was a lot of waste with MDS and stated…

> I've visited lots of people and the trays and blister packs are left on the side, they keep getting posted out automatically. Sometimes they don't take the medication because they are not sure what it's for, other times they've been in hospital and the deliveries haven't stopped. When I've reported them not being used they must be returned and disposed of, it's such a waste.
>
> Also speaking personally, I get my medication in the original packets so when the manufacturer of my medication changed, I was able to check the side effects when I was having an adverse reaction. It was a bulking agent that I had issues with. If I had my medication in a blister pack I wouldn't have been aware that the manufacturer had changed, and it would have taken much longer for me to work out that I was suffering from a side effect.

Each of the pharmacists and the dispensing GP complained about how time consuming the practice of creating MDS is. Below is a summary of the likes and dislikes raised.

- ☺ Can help some patients comply with taking their medication.
- ☺ You can discharge a patient from hospital as you know care providers will attend to them.
- ☺ Saves me time and peace of mind that my mother is being supported with her medication.
- ☹ Time consuming to prepare.
- ☹ Still not sure if the patient takes the medication at the right time of day.
- ☹ A lot of plastic to be disposed of.

4.6 Alternatives known or tried

The daughter wasn't aware of any other systems which might be of benefit to her mother, she had initiated the dispensing of medication from its original packing into a self-sourced dosette box. When she heard that her pharmacist could do this for her she jumped at the opportunity to use the service with no consideration for other options. She was also of the understanding that the carer would not help her mother unless the medication was in such a device.

The GP had a patient who had made up their own chart and knew of patients who marked on calendars what medication they need to take and crossed it off when they have done so.

The hospital pharmacists detailed the broadest range of options when asked what alternatives they consider, with one also talking about a community service they had previously referred patients to.

> Options we consider include medicines compliance chart, large print label, braille label, stickers indicating the time of day and the original packing with prompts from a relative or carer. There was previous a community team that we could refer patients to, they would check their compliance for taking medicines, this service seems to have disappeared though now.

The independent pharmacist spoke of a bespoke service which was initiated at the request of a family member.

> I've one young patient with a mental health illness, whose relatives have provided an electronic carrousel style dispensing machine. They have two devices and I fill one up every two weeks, there are 28 slots so two for each day, medication is released at the set times. It sends an alert if the battery needs changing, it's been left upside down or has been inappropriately used, the alert goes to me or a family member. It is time consuming for me to check, clean and refill but it seems to work well for this particular patient.
>
> Other thing I issue is medication in original packing with a Medication Administration Record (MAR) chart, also sometimes I provide dosette boxes and original packs with large print labels.

5. National guidance and Regulations

The Pharmaceutical Services Negotiating Committee provides guidance on the Equality Act 2010[2], they explain that a dispensing pharmacist is required to make a reasonable adjustment for patients who qualify under the Equality Act (2010) (Historically the Disability Discrimination Act 1995).

A person is regarded as being disabled, if they have a physical or mental impairment, which has a substantial adverse effect on that person's ability to carry out day to day activities. Additionally, the impairment must be either long term (that is, has lasted more than 12 months) or is likely to last more than 12 months or for the rest of the person's life (for example multiple sclerosis). For patients who do qualify, a reasonable adjustment should be made to ensure they are able to utilise their medication correctly.

Reasonable adjustments include (but not limited to):

- The use of large print labels
- Providing a patient with non-click lock caps
- Providing devices to make inhalers and dropper bottles easier to use
- Medication reminder charts
- MDS/dosette boxes

[2] https://psnc.org.uk/contract-it/psnc-briefings-pharmacy-contract-and-it/psnc-briefing-06017-equality-act-2010-a-quick-reference-guide-august-2017/

The National Institute for Health and Care Excellence (NICE) provides national guidance and advice to improve health and social care, and the Royal Pharmaceutical Society (RPS) is the body responsible for the leadership and support of the pharmacy profession within England, Scotland and Wales.

NICE 2009 guidance has use of a multi-compartment medicines system as one of several intervention options to support adherence of taking medicines if a specific need is identified. [1.2.8]

NICE 2017 guidance specifically relating to MDS covers three specific areas,

1. Supporting people to take their medicines
2. Ordering and supplying medicines
3. Transporting, storing and disposing of medicines

Guidance is clear that medicines should be supplied in their original packaging. However, reasonable adjustments must be made to help the person manage their medicines (for example, childproof tops), in line with the Equality Act 2010.

The guidance clearly details who is responsible and is therefore itemised below under Section 6. Roles and Responsibilities

The CQC also refer health and care providers to the NICE guidance, and inspections of domiciliary care take into consideration adherence to the guidance.

The RPS refers to an MDS as multi-compartment compliance aids (MCA).

The RPS published a document in July 2013, 'Improving patient outcomes: The better use of multi-compartment compliance aids.' It recommends the use of original packs of medicines with appropriate support is the preferred option of supplying medicines to patients in the absence of a specific need requiring an MCA as an adherence intervention.

Within the recommendations it highlights the need for the development of an 'evaluated national, multi-disciplinary tool to identify, assess and resolve medicines issues'. However, it does not say where responsibility for this lies, instead it provides links to patient assessment tools currently in use. These links are to webpages of other organisations which can update and amend these pages, without the knowledge of the RPS, and unfortunately, at the time of writing this document one of the four links failed to work.

The Human Medicines (Amendment) (No. 2) Regulations 2016, addresses the issue of medicines being labelled. The legislation document along with the explanatory note, which is not part of the Regulations but assists in understanding them, can both be quite confusing to understand. However, the RPS helpfully explains:

> Legislation requires that a dispensing label should be prepared for each item dispensed into an MCA and attached directly to the packaging each time the medicine is dispensed. With some MCAs, there is insufficient space to accommodate all the medicine labels and as a pragmatic solution, the labels are often attached to a separate card which accompanies the MCA. In this case, systems should be in place to ensure the card with the up-to-date medicine labels is linked to the MCA tray containing the medicine and there is no risk of separation.

Following an incident where an elderly patient died[3] as a result of swallowing a tablet whilst it was still in its blister packaging the RPS issued a support alert[4] advising pharmacists to refer back to the 'Improving patient outcomes' guidance.

> "Do not repackage MCA by inclusion of the original strip or blister packaging. Medicines should not be repackaged within MCA in their original strip or blister packaging as there have been reports of patients swallowing the medicine and its packaging resulting in gastric perforation or pelvic abscesses. The MCA package should be sealed as soon as possible after filling."

In summary

- An MDS is just one of a range of options which should be considered when making reasonable adjustments
- The use of original packs of medicines with appropriate support is the preferred option of supplying medicines to patients
- Patients should be assessed for the need of an MDS or alternative strategy
- If using an MDS, medication should be removed from its original strip or blister packaging
- When dispensing medication in an MDS, a description of the appearance of each individual medicine supplied should be included
- The patient should have an up-to-date patient information leaflet for each prescribed medicine
- If a patient is receiving social care, the provider should ensure there is a safe storage place or cupboard for storing medicines, including those supplied in MDS

6. Roles and Responsibilities

The guidance from NICE and the RPS emphasises the need for clear communication between people who are involved with a patient's medication.

Everyone is responsible for making reasonable and appropriate adjustment to services to ensure a disabled person is not discriminated against.

[3] https://www.pharmacyregulation.org/regulate/article/using-blister-packs-medicines-compliance-aids
[4] https://www.rpharms.com/about-us/news/details/the-use-of-blister-packs-in-medicines-compliance-aids--mca-

6.1 Prescribers

Whilst an increasing number of healthcare professionals are now involved in prescribing,[5] most prescribers are doctors. They are responsible for prescribing medications they determine are necessary for the patient and the frequency of supply[6].

6.2 Pharmacists and dispensing doctors

The NICE 2017 guidance states that:

Supplying pharmacists and dispensing doctors must supply a patient information leaflet for each medicine supplied, in line with The Human Medicines Regulations 2012. This includes medicines supplied in monitored dosage systems. [1.7.10]

Supplying pharmacists and dispensing doctors should supply medicines in their original packaging. They must make reasonable adjustments to the supplied packaging to help the person manage their medicines (for example, childproof tops), in line with the Equality Act 2010. [1.9.7]

Consider using a monitored dosage system only when an assessment by a health professional (for example, a pharmacist) has been carried out, in line with the Equality Act 2010, and a specific need has been identified to support medicines adherence. Take account of the person's needs and preferences, and involve the person and/or their family members or carers and the social care provider in decision-making. [1.9.8]

Supplying pharmacists and dispensing doctors should provide a description of the appearance of each individual medicine supplied in a monitored dosage system. [1.9.9]

Specific guidance paragraphs are referenced in brackets.

6.3 Social Care Providers

The NICE 2017 guidance states that:

Social care providers should ensure that an up-to-date patient information leaflet for each prescribed medicine is kept in the person's home. This includes medicines supplied in monitored dosage systems. [1.7.11]

When social care providers are responsible for storing a person's medicines, they should have robust processes to ensure there is safe access to medicines, particularly for controlled drugs (for more information see NICE's guideline on controlled drugs). These should include:

- identifying who should have authorised access to the medicines
- seeking advice from a health professional about how to store medicines safely, if needed
- ensuring there is a safe storage place or cupboard for storing medicines, including those supplied in monitored dosage systems [1.10.4]

Specific guidance paragraphs are referenced in brackets.

[5] https://www.nice.org.uk/guidance/cg76/resources/medicines-adherence-involving-patients-in-decisions-about-prescribed-medicines-and-supporting-adherence-pdf-975631782085
[6] https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Support/toolkit/rps-mca-july-2013.pdf

6.4 Commissioners

This paper focuses specifically on the use of MDSs, however they are just one aid in supporting people to take their medications appropriately.

The NICE 2017 guidance states that:

The term 'medicines support' is defined as any support that enables a person to manage their medicines. This varies for different people depending on their specific needs. The guideline aims to ensure that medicines are managed safely and effectively for all adults receiving social care in the community.

Health and social care commissioners and providers should review their local governance arrangements to ensure that it is clear who is accountable and responsible for providing medicines support. [1.1.1]

As such it should be recognised that health and social care commissioners have great responsibility in working together.

7. Risks and concerns of using an MDS

Although the pharmacists feel incidents are few and far between, everyone interviewed was aware of incidents where the wrong number of tablets had been included in the MDS or the tablets were in the wrong time slot.

One pharmacist described some of the difficulties they had in creating the MDS…

> “I’ve had a case where I’ve needed to put 12 tablets in one time slot and it was difficult for them all to fit in and stay put whilst sealing. There’s no correct way of checking an MDS is filled correctly, my colleague and I have our own separate methods they both work for us.”

The following risks and concerns with the use of MDSs have been identified through the interviews and existing literature.

- ⚠ An MDS should ideally not be used for medications where the dosage changes, such as Warfarin. If an MDS is used, then they need to be closely managed with the MDS issued each time a patient has a change in dosage.
- ⚠ Liquids cannot be stored in a standard MDS, there are some more advanced systems which can.
- ⚠ Some medications deteriorate, they can become unstable when removed from their original packing due to being sensitive to light or moisture. The Specialist Pharmacy Service provides details of medicines stability and suitability for use in an MDS.
- ⚠ Patients can become disengaged with their medicines, the RPS highlight that reliance on an MDS can cause patients and their carers to reduce their knowledge and understanding of the patient’s medicines along with how, and why they should be administered.

⚠ Different dispensers might use different MDSs which can cause confusion. The Clinical Reminder[7] report highlights how misunderstandings can be caused when the type of MDS is changed. A patient's aid was changed from having the days of the week labelled horizontally to vertically, this led the patient to taking a row of morning medications throughout the day and impacted her health causing confusion.

⚠ Adding in a step between medication being taken from its original packaging to a patient taking it, increases the numbers of opportunities for mistakes to occur. Pharmacists can create the MDS with errors, and patients and carers can mistakenly access medication from the wrong day or time.

⚠ After being prepared the wrong MDS can be provided to the wrong patient[8] which can result in the patient taking medication not intended for them and not receiving their own required medication.

8. Reflections on the use of Monitored Dosage Systems

Duerden (2018) found that whilst MDS may be helpful for people who have problems with their vision or dexterity most of the evidence supporting their use is anecdotal and research evidence is sparse. He concludes that "MDS should not be used in isolation and all other strategies to support people to manage their medication burden should also be considered."

This supports guidance which is clear that an MDS is just one of a range of options which should be considered when making reasonable adjustments and that patients should be assessed for the need of an MDS or alternative strategy.

Husain & Minshull (2019) conclude that an MDS can have a role in improving medication adherence in a selected population of patients who are best identified by person-centred adherence assessments.

The oversight groups feelings of an MDS being the default aid chosen or requested, was supported in the responses to the interviews. The interviews also identified that the assessments were often informal if they were carried out.

Yeung (2019) also found in a survey of 50 community pharmacists only 28% completed a needs assessment before commencing an MDS.

This could be due to preconceptions that an MDS will help most people take their medications. A number of websites for pharmacies in the Wessex area were reviewed with several saying an MDS can make your life easier, helping you to take the right dose of medicines at the right time each day.

A recent report[9] highlights the large chain pharmacy, Boots, is changing the way it dispenses medication for care home residents from MDS to patient pack dispensing (PPD) from 1 March 2019, in line with recommendations from NICE and the Royal

[7] Illsley & Brown, 2017
[8] https://www.npa.co.uk/news-and-events/news-item/common-dispensing-errors-resulting-in-indemnity-claims-uk/
[9] Robinson (2019)

Pharmaceutical Society. This policy change could prompt wider policy reviews in practices when dispensing to the wider population.

Community pharmacists are receiving a high number of requests from patients, carers and relatives for MDS. The increase in demand is also evident to hospital pharmacists. The interviews and lack of assessment suggest other options to support people to take their medication are either not considered, not known about or both.

If practices are going to change this needs to be done in conjunction with patients to ensure their needs are appropriately met. Also, communications and key messages need to be created collaboratively, across the pharmacy network and incorporating health, social care, patients, relatives and carers, so the reasoning behind any changes are clear and understood.

9. Alternatives to Monitored Dosage Systems

An MDS is just one possible option to be considered when a reasonable adjustment is required in line with the Equality Act 2010. To ensure a patient centred approach their needs should be discussed with them and options explored together.

The Managing Medications Guidance created by NHS Greater Glasgow and Clyde is available on the RPS website https://www.rpharms.com/resources/toolkits/improving-patient-outcomes-through-mca. It provides details of systems which patients might benefit from depending on their needs.

NHS Greater Glasgow and Clyde have been contacted during the development of this paper. Their guidance was written in 2012 and has not been updated since, the members of the team who still work for the organisation, and were involved with writing the guidance, were unaware that it is available to be accessed via the RPS website. They currently have no plans to update the guidance but would welcome this if another organisation were to do so.

The NHS Specialist Pharmacy Service is currently working on a summary document of different types of aids which support compliance in taking medications. The service is hoping to present its findings and receive approval at the Regional Medicines Optimisation Committee in November 2019. It is felt that this document could be very helpful to support people in identifying suitable aids to support people taking medications, and that we should stay abreast of developments.

However, in the interim and for this paper a summary of aids which are frequently used has been included in literature from charities and included below.

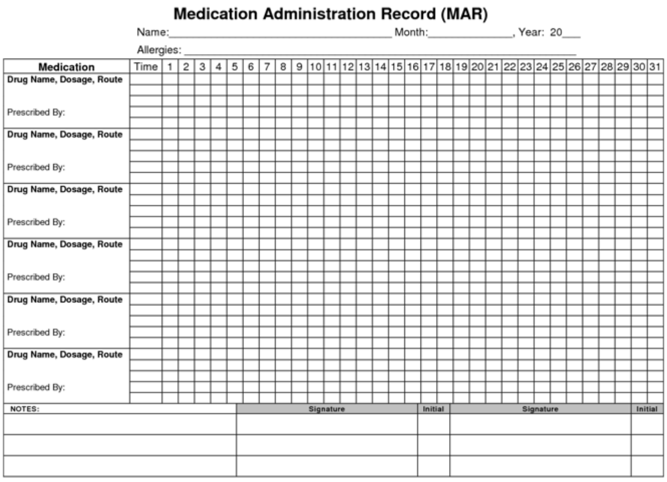
These have been included because the interviews identified that many people are unaware of systems which might help people to take their medications.

The use of aids can help to empower people to stay in control of their medication and maintain their independence.

This is not an exhaustive list, nor are these aids endorsed, however they have been included to support discussion on awareness of alternatives.

9.1 Poor Memory

- A Medication Administration Record (MAR) chart can be created and provided by pharmacists when dispensing medication. Medication is then recorded on the chart when it has been taken.


Medication Administration Record (MAR)

Name:__________ Month:________, Year: 20___

Allergies: __________

Medication	Time	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Drug Name, Dosage, Route Prescribed By:																																
Drug Name, Dosage, Route Prescribed By:																																
Drug Name, Dosage, Route Prescribed By:																																
Drug Name, Dosage, Route Prescribed By:																																
Drug Name, Dosage, Route Prescribed By:																																
Drug Name, Dosage, Route Prescribed By:																																

NOTES:	Signature	Initial	Signature	Initial

- Some people can find it helpful to mark off on a personal calendar when they have taken medication.

- Talking devices such as clocks and keychains can be programmed with several optional daily alarms to provide reminders of when to take medication.

- Reminders can be set on phones or devices using built in reminder systems or a specialist medication reminder application (app).[10] There are many available and it is advisable to use a tool which is already familiar or easily accessible on a device which is already owned.

[10] https://www.livingmadeeasy.org.uk/personal%20care/medication-reminder-apps-3824-p/

- There are many boxes and trays available which can be used to put medication into. Some people find it helpful to transfer their own medication out of its original packing into a box each week. Some of these devices are manual and others are electronical.

9.2 Poor Dexterity

- Easy open lids, medication can be decanted into different containers by a pharmacist if standard packaging is problematic[11].

- A grip opener can be used for medication bottles with child-proof lids.[12]

- A device can be used to remove pills from foil blister packaging, there are many different ones available. [13]

9.3 Visual impairment

- A pharmacist can provide labels in large print and alternative fonts which can be easier to read.

- A magnifying glass can be used to increase small print on medication labels, they are widely available and with some having easy grip handles or integrated lights.

[11] https://www.nras.org.uk/useful-tips

[12] https://www.livingmadeeasy.org.uk/personal%20care/pill-removers-p/multi_grip-opener-0026501-1309-information.htm
[13] https://www.livingmadeeasy.org.uk/personal%20care/pill-removers-1309-p/

- Audio labels can be programmed and stuck to medication packets, placing the pen on the label reads back the recorded message[14].

9.4 Further aids

Other aids which can support people to self-administer medication include

- A pill crush or pill cutter can be used to break down tablets if they are too large to swallow easily. A pharmacist would be able to advise if certain medication is suitable for breaking or splitting. There are many different aids widely available.[15]

- An eye-drop dispenser clips onto most eye-drop bottles and features a small lip, which holds the lower eyelid open to prevent blinking when administering the drops. The aid also holds the bottle at the correct angle.[16]

10. What other health and care systems are doing

Through networking with colleagues in the NHS several initiatives and pieces of work have been identified.

The **London Regional Medicines Optimisation Committee** is carrying out research relating to the use of MDS. This includes a literature review of guidance with evidence and a survey to audit policies used in secondary care that govern supply of medication compliance aids. Through this the committee is aiming to identify clear actions to address the use of MDS. One action as identified above is a summary document of different types of aids which supports compliance in taking medications.

[14] https://shop.rnib.org.uk/catalog/product/view/id/30463/s/penfriend3/
[15] https://www.livingmadeeasy.org.uk/personal%20care/pill-crushers-and-splitters-1308-p/
[16] https://shop.rnib.org.uk/autodrop-eye-drop-dispenser.html

A project in 2012 instigated the **Lewisham Integrated Medicines Optimisation Service**. This is a specialist pharmacy team which is integrated across primary and secondary care. This has led to:

- Patients being routinely assessed to identify what support they require to take their medication.
- A commissioned service to produce high quality Medicine Administration Record (MAR) charts to go with medicines dispensed in their original packets
- Collaboratively working across health and social care ensuring appropriate training and support for carers involved in medicines.

The outcomes of this initiative include appropriate use of MDS, prevention of social care visits for medicines, reduction in polypharmacy and a saving of £2 for every £1 invested. The lead of this initiative is now interested to see if the work is suitable for spread and adoption, and if elements of learning can help others.

Kent County Council are working to improve medicines reviews across the Kent and Medway area. They have created standardised MAR chart and guidance for home care providers and care workers on social care medicines' administration.

North East and North Cumbrian AHSN commissioned a two-year project to develop a more rounded understanding of the use of MDS and options regarding their use. Because of this work they are now developing an assessment tool.

Whilst there are currently no initiatives at a national level there is interest and an awareness of this document being created, along with the above detailed work.

11. Wessex landscape

Local guidance on 7 day prescribing and MDS requests was created and issued to organisations within the Wessex area in 2018[17]. Feedback from the Commissioning Care Groups (CCGs) was that the guidance was welcome and accepted. It is now felt by key pharmacy representatives across the area that this guidance needs to be built on and provide further information on the use of MDS and other options available to support the taking of medications.

The Wessex area is spilt across NHS South East and NHS South West regions, with Dorset being one sustainability and transformation partnership (STP) in the South West and Hampshire and the Isle of Wight forming another STP in the South East.

Dorset STP has developed into an integrated care system (ICS), bringing together health and social care commissioner and provider organisations to work in partnership. It covers a population of roughly 0.8 million, with many people living longer with long-term conditions[18]. Such conditions are likely to be managed through a variety of medications which will need managing and supporting.

[17] https://www.wessexlmcs.com/durationofprescriptionsand7dayprescribing
[18] https://www.england.nhs.uk/integratedcare/integrated-care-systems/dorset-ics/

The Hampshire and Isle of Wight STP is substantially larger and more complex, it brings together 20 organisations to commission and deliver health and social care for a population of about 2 million[19].

Any actions which are identified through discussions prompted by this paper will need 'buy in' and support from the STPs to ensure they are delivered.

12. Questions for discussion

1. Is change needed?
   b. What would good use of MDS in Wessex look like?

2. What change is needed?
   c. How do we implement current guidance?
   d. Are there specific messages for stakeholders?

3. Who can make the changes happen?
   c. How can we make sure the changes are sustainable?
   d. How will the changes enhance patient care and medicines?

4. How can we ensure the changes happen?

[19] https://www.england.nhs.uk/integratedcare/stps/view-stps/hampshire-and-the-isle-of-wight/

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14. Appendix A. Oversight Group Membership

The members of the oversight group are:

Name	Role	Representing/Organisation
Martin Stephens	Chair	Wessex Local Professional Network - Pharmacy
Laura Edwards	Medical Director (LMC Clinical Lead)	Wessex Local Medical Committees Ltd
Julia Booth	Acting Head of Primary Care	NHS England, South Region (Wessex)
Deborah Crockford	Chief Officer	Community Pharmacy South Central (formerly Local Pharmaceutical Committee for Hampshire & Isle of Wight)
Amanda Moores	Chief Officer	Dorset Local Pharmaceutical Committee
Karen Ashton	Assistant Director for Adults' Health & Care	Hampshire County Council
Katherine Gough	Head of Medicines Management Dorset CCG	Dorset CCG
Pauline Sharp	Chair of Dorset Home Care Providers	Domiciliary Care providers representative for Dorset
Kelly Wood	Senior Pharmacy Technician for Medicines Safety with human factors expertise.	University Hospital Southampton NHS Foundation Trust
Laura Harris	Project Manager	NHS England (assigned part time to South Region – Wessex)

15. Appendix B. Glossary of abbreviations

CCG	Commissioning Care Group
CQC	Care Quality Commission
ICS	Integrated Care System
MAR	Medication Administration Record
MDS	Monitored Dosage System
MCA	Multi-Compartment Compliance Aid
MCCA	Multi-Compartment Compliance Aid
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
RPS	Royal Pharmaceutical Society
SOP	Standard Operating Procedure
STP	Sustainability and Transformation Partnership