Monitored Dosage System
An operations manual to help you help your care homes
If you have any queries on ordering and deliveries of MDS supplies, please contact:
Bunzl Retail Supplies
Tel: 0161 743 2204
Fax: 0161 743 2315

If you have any queries relating to setting up a credit account, invoices, statements or other financial, please contact:
Boots Sales Accounting Department
Tel: 0115 949 2463
contents
This manual is designed to help you provide an effective monitored dosage system to care homes. In it you'll find information on how the system and equipment work, plus lots of guidance for best practice within care homes for you to pass on to your clients.

welcome to MDS 5
MDS equipment 6
how the MDS procedure works 11
how to seal the blisters 12
MARR guidelines for homes 13
part 1 of the MARR explained 14
information on parts 2 and 3 15
new resident guidelines for homes 16
what your homes need to do if they want… 18
how to work out how many items you need 19
MDS order form 21
application for credit account 23
welcome to MDS
Thank you for choosing the Monitored Dosage System (MDS).

What are the benefits?
There are lots of benefits to both your pharmacy and the care home, including:
• ‘No touch’ administration technique
• easy monitoring of doses
• increased security
• detailed record keeping
• reduced scope for error
• decreased stock holding in homes
• reduced workload
• less wastage
• planned dispensing in batches
MDS equipment
All this equipment can be ordered using the enclosed form see page 21

Blisters and foil
Each individual dose is placed by the pharmacy in one of the 28 bubbles of the blister pack and then sealed using the heat sealer and foil.

Blisters and foils may be pre-packed, in which case a label should be attached to the paper side of the foil stating:

• drug name and quantity
• batch number and expiry date (for guidance on expiry dates, please refer to Medicines, Ethics and Practice Guide produced by RPSGB)
• manufacturer's name for generic products
• date of packing
• initials of the dispenser and checker

When the blister is used, a dispensing label should be attached to the blister side, which is then fastened into the appropriate colour pack by the pharmacy. The blister should be placed into the front of the pack before fastening. This prevents the blister being misplaced and avoids the bubbles being crushed when the pack is snapped shut.

Only one type of medication should be placed in one blister pack, with the total dose in each bubble, when using the MDS for care homes.

There are currently two sizes of blister available: small and large. Doses must be put in the right size blister to make handling easier for carers.

Heat sealer
A thermostatically controlled sealing apparatus. For maintenance and repairs, please contact Wright Fenn and Co Ltd on 020 8994 5893 or email info@wrightfenn.com.
Pill packs
These are plastic reusable packs that hold the sealed medication. They're available in five colours, which are used for different times of day:

- Pink = morning
- Yellow = noon
- Orange = teatime
- Blue = bed time
- White with a white label = as-required medication
- White with green label = short-course medication (e.g. antibiotics)

There should be two sets of packs for each resident: one in use, one to be filled.

As-required (white) and short-course (green) labels
Attach these to white packs in place of the week 1-4 labels as appropriate.

Sun / moon labels
These convert the white packs to seven-day packs for domiciliary use.

Week 1-4 labels
Attach these to the front of the coloured packs, above the holes for blisters.

Day of week label
These come on a roll and are attached to the front of the packs on the left side. It's important the home agrees a start day with you before the labels are attached. The starting day at the top of the label will be the same for all coloured packs associated with a particular home. Important: these must never be attached to the white packs.

Photodividers
These clip into the files to separate each patient's medication, with a holder for a photo to enable positive identification of the patient. There is also space for allergy, care notes and patient ID labels.
Identity cards
These slot into the holder near the top of the divider and have space for a passport-sized photo of the resident, as well as personal details.

ID labels
These yellow labels attach to the bottom of the photodividers and bear the patient’s name, room and bed number. Each name is then visible when the dividers are clipped onto the files between the packs.

Care note label
These attach above the ID labels and allow a patient’s notes to be available to each carer who is administering medication, at the time of administration.

Allergy labels
These labels attach above the care note labels and allow a quick check for allergies whenever a new pack is added to the file. This information should always match the patient medication record.

Medtime cards
These normally clip into the front of each file and indicate the specific times that the medication should be administered. It can also be used to subdivide main medication administration times into different categories, allowing for more flexibility in medication administration times. While the pack colours allow for easy monitoring, the medtime card defines the specific dosage time.

Alert strips
These are attached to files whenever a patient or medication is missed out. The strip remains on the file at the point where the dose was missed until can be given or is noted as non-administered.

Reminder cards
These are used to define all doses which are not in blister packs. They’re labelled in the same way as the dispensed medication, with one card for each dosage time. Each card clips into the file. The standard white plastic reminder cards should be used in most cases. However, colour-coded reminder cards, which match the different colour pill packs, are available. Reminder cards not only define the timing of a dose but also remind the carer to assemble every medication required, before leaving the preparation area.

They can also be used for new admissions, short-stay clients and acute medications. Carers should inform you of their actions as soon as it’s practical. This helps you maintain and update patient medication records.
Files
When filled, clip the packs into the metal-ringed file. Two file sizes are available:
• Standard, which is the most popular
• Small, which is suitable for smaller storage cupboards

Please remember that only one type of coloured pack is ever clipped into one file, this means they can be easily identified at the right times of day.

Packs should be arranged so they are in a logical sequence for administering and in the same order as they appear on the medication records. This is to be determined by the home.

There are two sets of files for each home: one in use and one to be assembled.

Medication Administration Review & Request (MARR) record
This is a three-part record produced from patient medication records in the pharmacy and used by the home.

Also available:
• A ring binder to hold the sheets
• Dividers

Brackets
Use these to hang up the files in cupboards or on walls in locked medication rooms.

Pill splitter
This enables tablets to be divided into appropriate sizes, where appropriate.

Holdalls
These durable canvass holdalls can be used when delivering completed files in a professional and secure way.

Returns/disposed medications book
To be used for recording medicines returned or disposed of.
how the MDS procedure works
A step-by-step guide

Step 1: Supply the home with blank MARR records, where they can be completed by hand.

Step 2: The doctor reviews all handwritten MARRs and signs parts 2 and 3. At this time the doctor writes a matching set of prescriptions for 28 days' supply.

Step 3: Confirm date of the first supply of medication with the home.

Step 4: Agree which day of the week normal repeat medication will start.

Step 5: The home should arrange for the completed part of the MARRs to be sent to you with the prescriptions. The order of these records will determine the sequence of the packs on the file.

Step 6: Enter the details into the patient medication records to produce a batch of dispensing labels and MARRs.

Step 7: Attach the right labels to the photodividers and pill packs.

Step 8: Attach the photodividers, pill packs and medtime cards to the files and:
   • mark the medtime cards with pen to indicate the file number and the time for it to be administered
   • dispense the medication and insert the labelled blisters and reminder cards into appropriate packs
   • check the dispensing
   • deliver the completed files and MARRs to the home

Step 9: The home will then:
   • Separate MARR part 1 from parts 2 and 3
   • Complete the stock record count on part 1
   • Start administering medication on the agreed start day and date
how to seal the blisters
A step-by-step guide

Before you start, please note that not all medication is suitable for inclusion in MDS. Medications that are hygroscopic, sensitive to moisture or light, toxic when handled, or whose performance may deteriorate when removed from its original packaging, should not be blistered.

Packaging a particular medication in MDS is the professional decision of the pharmacist. If you are in any doubt as to the stability or suitability of packing certain medication into MDS blisters, please contact the manufacturer of the medicine.

Step 1:
Use the heat sealer machine. Please refer to the manufacturer’s instructions on how to correctly use it.

Step 2:
Choose the smallest possible blister size for your medication. Please make sure that the tablets do not protrude from the blisters as they may stick to the foil when heated.

Step 3:
Place the blister pack into the heat sealer and fill each of the bubbles with the appropriate number of capsules or tablets. For alternate days, fill every other bubble.

Step 4:
Put a slight fold into each end of the foil using your thumb and first two fingers of each hand. This prevents the foil curling before it’s sealed. Place the foil shiny face down onto the blister.

Step 5:
Seal the blister and foil in the heat sealer.

Step 6:
Rub the foil with a clean cloth and remove the blister pack from the heat sealer.

Step 7:
Label the sealed blister so when it’s in the appropriate coloured pack, the label shows in the box in the top right-hand corner.

General points:
• As-required medication is packed in the same way. For one or two PRN, pack only one in each bubble. For two PRN, pack two in each bubble.
• Short-course treatment can be packed into one blister and placed in an appropriately labelled white pack.
• When packing gelatin capsules, using large blisters is recommended to reduce the risk of melting the capsules to the foil.
• Use small blisters whenever possible to increase the number of pill packs on each file and reduce the number of files needed for the home.
The MARR consists of a three-part NCR form and can either be handwritten or produced on the computer. It’s best printed in the pharmacy from the same computer records used to produce the dispensing labels. This ensures there are no discrepancies between the two.

Please explain this guidance carefully to the home, as it’s essential that the MARR is completed correctly.

1. With the 3 parts together, complete sections a), b), c), d), e) and h). For new clients, this will be done by hand in the home. The information will then be transferred, using part 2, to the pharmacy computer record for printing. Carers should always use a black pen, in case a photocopy is needed.

2. As the medication is checked in at the home. They should separate part 1 from parts 2 and 3, then complete sections g) and i) on part 1 only.

3. Part 1 should be filed separately from parts 2 and 3.

4. The home should only use part 1 when administering medication. They must fill in sections e) and f) as each dose is administered with the carer’s initials. The carer’s initials should be registered in the home’s official records, together with their full name.

5. Variable doses need to have quantity, time and initials recorded on the sheet.

6. Any leftover unused medication should be disposed of in line with current waste management guidelines. Sections j), k), l) or m), n), o) should be completed.

7. If repeat medication is requested from the surgery, use parts 2 and 3 unseparated and complete column q). Part 2 goes to the surgery and the home keeps part 3. This is their permanent record and can be used to check queries.

8. Parts 1 and 3 should never leave the home.

9. The doctor should make out the new prescriptions for the length of time requested (28 days for chronic medication) or make any changes using sections a) and f), then signing and dating section q). If a planned review is to take place, f) should also be completed.

10. Part 2 must be returned to the home with the prescription. Both should then be passed to you. Use part 2 to check for changes in therapy and to update pharmacy records. You should then produce a new set of 3 parts to match the new supply of medication. The original part 2 should be returned to the home.

11. The complete set of records should be filed in the home.

12. When the doctor is reviewing medication and making changes in the home, parts 2 and 3 should be completed together. Part 2 and any prescriptions should then be passed to the pharmacy.

13. If any changes are made on part 2, the change must be made immediately to the MDS. A new MARR should be produced and part 1 should be filed with parts 2 and 3.

14. Always keep the MDS up to date and make the records match the system. The MDS and the MARR have been designed to match each other exactly. This allows for easy checking of performance of both the system and those operating it.
part 1 of the MARR explained:

Client details: (a)
Name, date of birth, allergies, doctor etc.

Start date: (b)
Date the present form begins
(week 1, day 1).

Medication: (e)
There are spaces for six entries on each form. This is the patient's medication profile and should include information such as drug name, strength and form, dosage and directions. This section includes the commenced date - which represents when the medication was started or last changed - and the hour boxes, which define the dosage times:
M = (morning, pink packs)
N = (noon, yellow packs)
T = (teatime, orange packs)
B = (bedtime, blue packs)
More specific times can be inserted in these boxes to the left or in the two spare boxes for special dosage times, such as short courses. The dose can also be entered into the right of the box.

Period: (c)
Date the present form ends
(week 4, day 7)

Start day: (d)
Day of the week the form begins (week 1, day 1). This corresponds to the day marked at the top of the day-of-the-week labels on the MDS packs.

Week 1, 2, 3, 4: (f)
These match the four weeks across the top of each pack. The numbers 1 to 7 beneath are the seven days of the week. Every one of the bubbles on each blister in a pack has its equivalent box in the black-and-white grid on MARR part 1. These boxes are for the home's administration record. Once the appropriate dose of medication has been taken the carer should sign the correct column by the correct drug and administration time and note the reason for refusal if the dose has not been taken.

Received: (g)
Date the medication is received at the home.

Quantity: (h)
Amount received.

By: (i)
Initials of the carer who receives the medication.

Returned: (j)
Date the medication was returned.

Quantity: (k)
Amount returned.

By: (l)
Initials of the carer returning the medication.

Destroyed: (m)
Date destroyed.

Quantity: (n)
Amount destroyed.

By: (o)
Initials of the carer who destroyed the medication and a witness if this is local policy.

Refusal codes: (p)
There are six codes on the form: A to F.
information on parts 2 and 3:

**Continue (r)**
For the doctor to indicate continuation of therapy at the review dates.

**Request for n days: (q)**
The number of days’ treatment required for continuing therapy (usually 28 days).

**Discontinue (s)**
For the doctor to indicate discontinuation of therapy.

**Change directions to: (t)**
For the doctor to indicate changes in therapy.

**Doctor’s signature: (u)**
Signature and date for any changes to parts 2 and 3.
1. The home should complete a handwritten MARR for each new admission.

2. Part 1 should be used immediately to record details such as medication received into the home, medication offered and refused, etc.

3. Part 2 should be used to order items from the doctor and / or to inform you of the resident’s profile.

4. All items from the resident’s own stock of medication must be identified with the reminder cards. The home staff need to complete the labels by hand and put the reminder cards into the appropriate file.

5. Part 2 and the prescription should be sent to you. In an emergency, part 2 and the prescription can be phoned to the pharmacy, providing they’re written and immediately available for inspection.

6. If the prescription isn’t available, the home should inform the doctor to let you know to arrange for a supply. In these cases, only part 2 should be sent. Also, if the prescription isn’t available, the home should inform the doctor to contact you to arrange for a supply. The prescription must arrive at the pharmacy within 72 hours. This procedure can’t apply to CDs and a prescription must be presented at the pharmacy before it can be dispensed.

7. You should enter the details onto the computer records and produce a new MARR.

8. You should dispense the items into packs, which can be collected by the home staff along with the new MARR. If it’s an emergency, you may choose to deliver the items, the new MARR and old part 2 to the home.

9. You must check the items dispensed and any reminder card labels against the MARR, prescription and any other source material.

If the new residents are only there for a short stay with no MDS, please follow the same guidance except point 4.

It is the responsibility of the pharmacist in charge of the pharmacy to ensure that all medication supply is in line with legal requirements, the NHS terms of service, and guidance issued by the Royal Pharmaceutical Society of Great Britain.
...regular repeat medication
New prescriptions for regular repeat items must be ordered from the surgery by the home well before the packs run out. This gives you time to prepare the new set of medication. The repeat prescriptions are ordered using the MARR forms, so that the prescription arrives with the re-order sheet (part 2) at the pharmacy seven working days before the start of the new packs.

...to discontinue medication
Discontinued medication must be removed from the system immediately after the doctor has signed and dated the change in MARR parts 2 and 3. The label should be cancelled by the person removing the pack from the file and writing 'discontinued', the date and their signature on the label. The returned section should be completed on MARR part 1.

The whole pack with blister and signed part 2 should be returned to the pharmacy. You should prepare and return a new amended MARR and the old part 2 as soon as possible.

...new medication and doses
These prescriptions will need to be filled sometime during the 28-day cycle before the agreed repeat date. On these occasions, 28 days' worth of medication should be supplied. The home must start from the exact bubble that corresponds with the correct day in the cycle. Other prescriptions will run out on the usual day but the mid-cycle prescriptions have days to run. Before these packs are exhausted, it must be decided whether the mid-cycle prescription should be repeated. It should then either be discontinued or prescribed in a quantity to bring it into line with the other repeat prescriptions. This method ensures a review of new medication and doses.

...as-required (PRN) medication
It's important to estimate the order requirements of as-required medication at the same time as other repeats are ordered. This will be placed in white packs and labelled appropriately.

...short-course medication
This medication is also placed in white packs. Short courses, where the doses are linked to regular medication times, have reminder cards. Where the regular medication doses are to be given at regular intervals, a separate procedure must be set up to ensure this is adopted amongst home staff.

what your homes need to do if they want…
how to work out how many items you need

To calculate what you need, times the number of residents in a home by the figure in the column on the right.

For example:
If the home has 30 residents, you'll need 120 pink pill packs (30 x 4 = 120)

These figures are provided as guidelines only - you need to make a decision on the exact quantities you need.

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pill pack - pink</td>
<td>4</td>
<td>Allergy labels (roll of 250)</td>
<td>0.03</td>
</tr>
<tr>
<td>Pill pack - yellow</td>
<td>2</td>
<td>Patient ID labels (roll of 250)</td>
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<tr>
<td>Pill pack - orange</td>
<td>2</td>
<td>Reminder cards</td>
<td>5</td>
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<tr>
<td>Pill pack - blue</td>
<td>2</td>
<td>PRN labels (roll of 100)</td>
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<td>Pill pack - white</td>
<td>1</td>
<td>Short course labels (roll of 100)</td>
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<td>File</td>
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<td>Blisters - large (pack of 1000)</td>
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</tr>
<tr>
<td>Medtime card</td>
<td>0.7</td>
<td>Blisters - small (pack of 1000)</td>
<td>0.03</td>
</tr>
<tr>
<td>Alert strip</td>
<td>0.6</td>
<td>Foil (pack of 1000)</td>
<td>0.04</td>
</tr>
<tr>
<td>Week 1-4 labels (roll of 250)</td>
<td>0.06</td>
<td>These items don't depend on the number of residents</td>
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</tr>
<tr>
<td>Days of the week labels (roll of 250)</td>
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<td>Item</td>
<td>Quantity</td>
</tr>
<tr>
<td>Photodivider</td>
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<td>Pill splitter</td>
<td>1</td>
</tr>
<tr>
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<td>MARR sheets (pack of 500)</td>
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<tr>
<td>Holdall (blue)</td>
<td>0.06</td>
<td>Heat sealer</td>
<td>1</td>
</tr>
<tr>
<td>Care note labels (roll of 250)</td>
<td>0.03</td>
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How to order:
Enter the details into the enclosed order form and then either post it, fax it or phone your order through. Details are on the form. Please note the minimum order quantities where these apply.

All orders are subject to a minimum total value, excluding VAT. This is currently £25 but is subject to change without notice. Orders not meeting this minimum value won't be processed.

Any order made is subject to Boots’ terms and conditions of supply which are available on request.
MDS order form

To place orders call 0161 743 2204 or fax to 0161 743 2315

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<th>ITEM</th>
<th>CODE</th>
<th>PRICE</th>
<th>QUANTITY</th>
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<td>Labels - sun / moon (250)</td>
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<td>Labels - Week 1-4 (250)</td>
<td>16-57-941</td>
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<td>Metal file base plate</td>
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<td>Alert tag - single</td>
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Please order all pill packs and reminder cards in multiples of 25. All prices are exclusive of VAT. Prices are correct at time of print but are subject to change without notice.
# Application for Credit Account

*(please complete in block capitals)*

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<thead>
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<th>Ltd co / partnership / sole trader</th>
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<td>Fax no</td>
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<td>Delivery address (if different)</td>
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<tr>
<td>Company reg. no</td>
<td>Contact name / dept</td>
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<tr>
<td>Type of business</td>
<td>Boots contact name</td>
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<td>What purpose do you require this account?</td>
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**Non-limited companies complete this section:**

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<td>Credit limit requested</td>
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**Trade references (please provide 2):**

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Banker’s name

Address

I have read the enclosed terms and conditions, understand and accept them.

<table>
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<th>Name</th>
<th>Signature</th>
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Once complete, post to this address

Boots The Chemists Limited
Finance, Sales Accounting
D90 East S11
1 Thane Road West
Nottingham NG90 1BS

**Approved**

**Account**

**Management use only**