All Wales Medicines Strategy Group

Grŵp Strategaeth Meddyginiaethau Cymru Gyfan

Monitored Dosage System (MDS) Standards

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1.0 PROCESSES FOR PATIENTS DISCHARGED USING AN MDS

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1.1.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**AWMSG** The AWMSG recommendation provides a reasonable minimum standard for patients admitted on an MDS and requiring one at discharge for hospitals that are unable to provide discharge medication directly[2].
Proposed quality statement	Hospital processes for patients requiring an MDS at discharge should be reviewed to minimise hand-offs and reduce waste.
Proposed quality measures	**Structure:** Evidence of local arrangements to ensure that people requiring an MDS at discharge receive their medication appropriately. **Process:** Proportion of people that continue to require a MDS at discharge whose prescription or medication is provided by the hospital. Numerator: number of patients requiring an MDS at discharge whose discharge medication does not require an immediate GP-generated prescription. Denominator: number of patients requiring an MDS at discharge.
Target audience	Medicines and Therapeutics Committees (MTCs), health board commissioners, GPs, patient groups

1.1.2 Supporting evidence

Patients must be able to continue to take their medication safely and obtain discharge medication in a manner that avoids discharge delays and uses the resources of NHS Wales appropriately. Welsh Health Circular (WHC) 2002 (71) outlines the appropriate supply of medication at discharge[7]; however, many hospitals have not been able to provide medication directly to the patient at discharge when an MDS is used. Therefore, alternative systems have been developed. The AWMSG recommendation above outlines a minimum standard for hospitals that are unable to provide discharge medication directly. This recommends that prescriptions are dispensed by community pharmacies from prescriptions sent directly from hospital pharmacies, without the need for a GP-generated prescription. In these cases, prompt and effective communication from hospitals to community pharmacies is essential to successfully manage the discharge of patients that use an MDS. Pharmacists require adequate notice to ensure that medicines can be ordered in advance of the patient being discharged; however, premature notification and delayed discharge may necessitate changes in the medication regime. Consideration of medicines should be an integral part of discharge planning.

Health board policies for the provision of MDS must recognise the requirements of the Disability Discrimination Act (DDA) and the responsibility of the service provider to make appropriate adjustment to their service.
Patient experience (from secondary care survey):

"Pharmacy tries to deliver medication to a patient who has been discharged. She is at home but is unable to answer the door due to lack of mobility. The family go to the discharging ward at [hospital A] the next day [Saturday] as they have found that their mother has been sent home without medication. The ward arrange for urgent dispensing of TTA medication from [hospital B] which is taxied up to [hospital A]."

Pharmacist experience (from secondary care survey):
"Discrepancies have occurred between the faxed discharge summary [received by GP and community pharmacy] and the discharge summary received by the GP surgery by post. This is feasible because changes may occur in the last 48 hours of hospital care before the patient is discharged."

1.1.3 Current practice

Both the primary and secondary care surveys noted variation in the way that discharge medications and prescriptions were being supplied. Six out of fourteen practices mentioned that sometimes, or all the time, prescriptions were dispensed by community pharmacy on direction from the hospital (as recommended by AWMSG[2]). No practices stated that their patients were issued with an MDS filled in the hospital. Two out of four hospital sites in Hywel Dda fill the MDS boxes within the hospital pharmacy.

This data is from selected practices in limited areas of Wales and may not reflect activity in other parts of the country.

Some hospitals do provide an MDS at discharge. This can reduce the number of personnel involved, reduces faxes/phone calls to community pharmacies and GPs, and promotes continuity. It also allows a week before further supply is required.

Experience from secondary care survey:
"*Out of thirteen MDS discharges that were followed up, two caused problems to the community pharmacy. One of these arose in the GP practice generating a FP10 prescription."*

1.2 GENERAL PRACTICE PROCESS

1.2.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**AWMSG** The AWMSG recommendation provides a reasonable minimum standard for patients admitted on an MDS and requiring one at discharge for hospitals that are unable to provide discharge medication directly[2].
Good practice point	GP practices and pharmacies should have a robust system so that patients using an MDS receive their medicines promptly after discharge from secondary care. This will reflect local health board policies which should be easily accessed. All practice staff should be aware of the system in place through practice procedures/protocols.
Proposed quality statement	GP and community pharmacies should ensure that all staff are aware of their local health board policy for provision of medication for patients discharged using an MDS.
Proposed quality measures	**Structure:** GP practices and pharmacies can demonstrate their policy for patients discharged using an MDS (note that this should not contravene the AWMSG recommendation in Section 1.1.1). **Process:** Proportion of practice patients that receive their medication at discharge in accordance with local health board policy. Numerator: number of patients receiving their discharge medication according to health board policy. Denominator: all patients discharged using an MDS.

2.0 PATIENTS AND CARERS SHOULD HAVE ACCESS TO A VARIETY OF OPTIONS FOR MEDICINES DELIVERY

2.1 Relevant national recommendations and proposed quality statement

National recommendations	**NICE Clinical Guideline 76: Medicines adherence**[8] Patient-centred care: "*This guideline offers best practice advice on how to involve patients in decisions about prescribed medicines and how to support adherence. Treatment and care should take into account patients' individual needs and preferences. Good communication, supported by evidence-based information, is essential. Healthcare professionals are reminded of their duty under the Disability Discrimination Act (2005) to make adjustments to ensure that all people have the same opportunity for good health.* *Healthcare professionals should follow the code of practice that accompanies the Mental Capacity Act (2005) if concerned about patient capacity. If the patient agrees, families and carers should have the opportunity to be involved in decisions about treatment and care."* An MDS can be seen as a solution for all medicines adherence problems. Health and Social Service professionals should advise patients or carers to contact their local pharmacy for a review under the Disability Discrimination Act, rather than recommending an immediate MDS. If the pharmacist considers it appropriate the MDS may be supplied, but alternative options are often more effective, such as reminder sheets. **RPS draft guidance: Raising standards for the use of multi-compartment compliance aids** [3] *"1. Before any decision is made on the use of an MCA, the needs of every patient should be individually assessed by the supplying pharmacist, or by a multi-disciplinary team with involvement of a pharmacist, and documented. This should take into account the physical and cognitive ability of the patient and the nature of the care support available* *2. There must be assurance that the MCA system will positively improve an individual patient's ability to administer their medicines compared to when dispensed in conventional dispensing packaging. Any decision must meet the needs of the individual patient and not be driven by convenience or commercial gain."*

Proposed quality statement	Patients and carers should have access to a variety of options for medicines delivery, according to need. An MDS should only be initiated or discontinued by competent professionals.
Proposed quality measures	**Structure:** All professionals within a health board to refer patients (and carers if appropriate) to the community pharmacy that will dispense the patients' prescriptions for assessment prior to providing an opinion on the most appropriate form of support. **Process:** Prior to the initiation of an MDS in the community, the pharmacist is responsible for ensuring that an appropriate formal assessment has been undertaken in consultation with the patient and/or their carer. This should include due consideration of alternative options for patients to use their medications effectively. Numerator: number of patients served by the pharmacy that had an appropriate formal assessment prior to initiation of an MDS. Denominator: number of patients served by the pharmacy who were initiated on an MDS.
Target audience	All health care professionals, patients and carers

2.2 Supporting evidence

Pharmacist experience (from primary care survey):

"Packing medicines in an MDS is a labour-intensive and inflexible process. Once packed in an MDS it can be quite difficult to change medication."

"Medications may change before discharge, doubling the workload for all."

In the community, the service provider for provision of an MDS is the community pharmacist. The community pharmacist is responsible for assessing and making appropriate adjustments to the service provided to meet the needs of 'disabled people'. The service provider cannot therefore automatically accept the assessment undertaken by another healthcare professional but may chose to do so.

The decision to initiate an MDS within the hospital environment should be made by a competent professional. This may be a hospital pharmacist or multidisciplinary team. However, referral to the community pharmacist or dispensing doctor is preferred where possible to enable assessment once the patient has been discharged. It is important that other health and social care providers only refer to pharmacies those patients for whom there is a clear indication that they may struggle to take their medicines without additional support.

The RPS draft guidance states:

"There are many ways in which patients can be helped to take their medicines correctly, or ways to help carers and people administering medicines in care homes to administer correctly, such as a medication review to reduce inappropriate polypharmacy, use of reminder charts (as a memory aid), labels with pictograms, large print labels, information sheets, reminder alarms, IT solutions and new technology such as phone apps. [...] In addition, patients themselves may have developed reminder

systems to help them take their medicines correctly, and care workers, family and friends may be in a position to provide support to patients. Patients should be encouraged and supported to retain autonomy over their own medicines administration for as long as they feel capable of doing this. Their views on their medication should be noted and respected wherever possible."[3]

Medicines reminder charts are available[9], as are other reminder services, such as those that use an alarm or phone call to alert the service user to take their medication.

Consent should be obtained from the service user if assistance with medicines administration is under consideration. Some Health and Social Services teams obtain and record consent.

2.3 Current practice

There is a lack of clarity regarding the assessment of people that may need assistance with medication administration. Health and Social Services personnel ask medication-related questions when undertaking the unified assessment process (UAP). The responses to these questions need to be considered in the context of responses to other UAP questions, such as those regarding vision or manual dexterity.

Health and Social Services experience (from secondary care survey):
"Local Enhanced Service for community pharmacy where a Medicines Administration Record (MAR) is provided alongside 28 days supply. This was worked through in conjunction with Social Services to bring about a change in their policy. MDS was changed from first choice to being considered only after a number of other options. This has reduced the numbers initiated onto an MDS significantly."

A similar community pharmacy Local Enhanced Service exists in the Aneurin Bevan Health Board: the Torfaen Medication Administration Scheme (TMAS). This is a joint scheme with Health and Social Services that provides a training package in the administration of medicines for Health and Social Services carers (this does not include private carers). Referrals are initiated when the administration of medication requires more than a verbal prompt. In cases where the medication regimen is complex, administration via an MDS may be retained. In all cases, the MAR chart is signed. Pharmacy staff affix duplicate labels to the MAR chart at the point of dispensing. Robust systems are still required for alterations/addition of medication when using MAR schemes.

MDS are not appropriate for patients that have limited manual dexterity or visual impairment. Liquids, creams and medicines with directions to use 'as required' are not appropriate for MDS.

For guidance in assessing patients for MDS see http://www.pcc.nhs.uk/98.php.

3.0 PROVISION OF TRAINING TO CARERS TO SUPPORT MEDICINES USE

3.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**Department of Health: Assisted administration – medicines support and monitored dosage systems**[10] "*Compliance aids and monitored dosage systems can be useful but some patients are provided with them without a proper assessment of whether they are the best way to meet their needs.* *Some local schemes have generally found that such aids are the best solution for only around 50% of people referred for such a service*." **Welsh Government National Minimum Standards for Domiciliary Care Agencies in Wales – Standard 10**[11] "*The agency's policies and procedures on medication and health related activities protect service users and assist them to maintain responsibility for their own medication and to remain in their own home."*
Proposed quality statement	Training should be available to employed carers to support medicines use.
Proposed quality measures	**Structure:** Evidence of arrangements to ensure carers are identified and receive appropriate training in medicines administration. Social Services and employers are responsible for providing training to carers; health boards may support this training. **Process**: Proportion from a sample of employed carers that support medicines use, or would like to support medicines use, and have received training.
Target audience	MTCs, Health and Social Services, employers, carers

3.2 Supporting evidence

The proportion of private and Health and Social Services carers that have received training in medicines administration is difficult to ascertain due to a high staff turnover and informal carer arrangements.

Various concerns have been expressed regarding the use of MDS, including:

- Removing medication from original packaging may reduce the efficacy.
- Patients may only be able to have part of their medication in an MDS with the rest provided in their original containers, leading to confusion.
- Directions for use, such as the requirement to be taken with or after food or other cautionary/advisory labels, may not be followed once the medication is removed from original packaging.
- Patient information leaflets are not routinely available but can be supplied on first dispensing of new medications. Repackaging medicines may in the future contravene European directives designed to eliminate counterfeit medication[12]

3.3 Current practice

Some regional Health and Social Services require carers' clients to use MDS, while others do not. Health and Social Services support the provision of training to carers to promote medicines use, e.g. competent social care staff administer from original packs and record on a MAR.

Example of good practice – Torfaen carer training:
All care providers participating in TMAS receive initial training in medication administration (OCN accredited) from a health board pharmacist with in-house training thereafter. Health board refresher training is available on request. This is a requirement of the contract between the community pharmacy and Health and Social Services.

Employers can consider commissioning a community pharmacy enhanced service to provide medicines management training to carers if they do not have in-house expertise.

3.4 Related standards

Welsh Government "National minimum standards for domiciliary care": Standard 12 (see regulation 13 [conduct of agency]):
"12.1 An assessment is undertaken, by an appropriately trained and qualified person, of the potential risks to service users and staff associated with delivering the service user's package of care (including, where appropriate, the risks associated with assisting with medication and other health related activities) before the care worker commences work and is updated annually or more frequently if necessary."[11]

3.5 Resources

- Training course endorsed by RPS and the Association for Real Change: Handling Medication.
- Royal Pharmaceutical Society. The handling of medicines in social care[13].
- Joint medication policies such as the "Joint Medication Policy for Adult Social Care Settings" produced for Wrexham County Borough Council, Wrexham Local Health Board and the North Wales NHS Trust (Eastern Area).

4.0 PRESCRIBING SAFELY IN PRIMARY CARE FOR PATIENTS USING AN MDS

4.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**SIGN 65: The immediate discharge document**[14] *"Details of whether compliance aids are required or already given to the patient should be provided. If already provided, detail whether being used or not."*
Proposed quality statement	Prescribers should be aware at the point of prescribing that the patient is using an MDS. Any medication change should be communicated effectively with the pharmacy involved.
Proposed quality measures	**Structure:** Practice prescribing policy should outline how MDS users are identified and how changes in medication are communicated between the patient, pharmacy and practice. Read code 8BIA "*uses an MDS*" may be helpful. **Process:** Proportion of patients using an MDS that are readily identified at the point of prescribing. Numerator: number of patients whose records are marked to show the use of an MDS at point of prescribing. Denominator: all patients in a practice using an MDS (this may require provision of lists from local pharmacies to practices for independent verification).
Target audience	Patients and carers, prescribers

4.2 Supporting evidence

When a patient in the community stops or starts an MDS, the pharmacy involved should communicate this to the practice, and vice versa, so that the patient's prescribing record can be updated. If there is no prompt at the point of prescribing, the pharmacy may not learn of any change in medication until the next prescription is issued. This will be a particular issue if prescriptions are provided to the pharmacy in advance.

There are inherent risks to patient safety when medicines are changed. The primary care survey showed that community pharmacists experience particular problems when medicines are changed. Changes may lead to wastage, e.g. because the entire MDS tray may need to be reissued, or one or more previously prepared MDS may need to be retrieved.

4.3 Current practice

The primary care survey found that the read code 8BIA "*uses an MDS*" can be used to identify this group of patients. Practices providing seven-day prescriptions commonly identify patients using an MDS in this way. However, not all practices in the primary care survey had a system for identifying patients using an MDS. It should be noted that the General Practitioners Committee (GPC) Wales states*:*
[To meet the requirements of the Discrimination Act (DDA)] "pharmacists must make a professional judgement on whether the patient, as an individual, needs any assistance in compliance with medication and covers provision of any reasonable adjustment to the pharmacy service to meet identified needs. It does NOT mean that the pharmacist

is funded to provide MDSs on demand and the nature of any support provided is one for the professional judgement of the pharmacist. This means that all new patients requesting compliance aids will have an assessment to check if they are covered by the provisions of the DDA and so [if they are covered by the requirements of the DDA] there will be no requirement for new initiations of weekly scripts for this purpose – though GPs are free to continue with short scripts if they feel there are other clinical reasons such as overdose risk."[15]

Comment from primary care survey:
"In other practices, the prescribing screen is marked or there is a 'pop up reminder' to identify patients using an MDS. This will alert the prescriber to communicate any medication changes with the pharmacist."

Good communication is essential; a practice taking part in the primary care survey which stated that MDS at discharge was not a problem area has a community pharmacist that visits weekly to pick up problems.

Additionally, pharmacists need to be advised when patients are admitted to hospital. If a health board has a scheme in place, this step should be included within the specification. Hospital pharmacy should communicate with community pharmacy, both on admission and discharge.

Patients should be aware of the implications of changes in medicines and encouraged to advise professionals that they are using a MDS.

5.0 PROCESSES FOR MEDICINE RECONCILIATION FOLLOWING DISCHARGE FOR PATIENTS USING AN MDS

5.1 GENERAL PRACTICE PROCESS

5.1.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	SIGN 65: The immediate discharge document[14]
Proposed quality statement	Patients should be issued with, and GP practices and community pharmacies should receive, accurate and timely discharge information for all patients. Medication changes should be reconciled with GP patient records within two working days of receiving discharge information.
Proposed quality measures	**Structure:** Evidence of a process to ensure that patients' medication records are updated within 48 hours of receipt of a discharge summary for those using an MDS. **Process:** Proportion of patients discharged on an MDS whose medications are reconciled within 48 hours of receipt of discharge summary. Numerator: patients discharged on an MDS whose medication is reconciled within 48 hours of receipt of a discharge summary. Denominator: all patients discharged on an MDS where the practice receives a discharge summary.

5.1.2 Supporting evidence

MDS users are particularly vulnerable to communication lapses between primary and secondary care. In the primary care survey, 50% of MDS users were admitted at least once over the previous 12 months, and 22% had two or more admissions. The mean number of medicines in the trays was 7.8 (see Appendix 1).

Pharmacy experience (from primary care survey):
"Official medication changes are put into the blister pack (1 week supply) but by the time the next blister pack is due the change information has not reached the surgery and this results in staff having to chase around to get changes confirmed before the next blister set can be released from the pharmacy."

5.1.3 Current practice

Currently, many discharge letters are still delivered by hand or post to surgeries after discharge. As practice shifts to electronic discharge, the time lag to delivery of this information should improve.

Current discharge letters in many localities do not routinely share information regarding whether the patient has been discharged using an MDS; this information should be routinely included[14] in addition to adequate information regarding the admission. Discharge information should contain adequate detail of the ongoing treatment regimens, including stopping, starting or changing medication. There should be

complementary documentation to note that the GP has recognised and acted on these changes promptly. There should be a unified approach across practices.
Within practices, there is a delay before the discharge information is reconciled with practice records; in the primary care survey (see Appendix 1) half of the practices (7/14) reported the reconciliation of patients' prescriptions post-discharge within 24 hours, the remaining half were achieved within 72 hours. It was not clear how the practices had measured or documented when the medicine reconciliation had occurred. The time for medicine reconciliation is often written into the practice's prescribing policy.

Where electronic discharge is standard procedure, read coding for medicines reconciliation could aid clear and consistent documentation (e.g. 8B3S000 Post hospital discharge medication reconciliation with patient).

5.2 PHARMACY PROCESS

5.2.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**The Discharge Medicines Review (DMR) service** The DMR service will provide support to patients recently discharged between care settings by ensuring that changes to patients' medicines made in one care setting (e.g. during a hospital admission) are acted upon as intended in the community, thereby reducing the risk of preventable medicines-related problems and supporting adherence with newly prescribed medication. The service, which builds on the existing Medicines Use Review (MUR) service, will provide an opportunity to support patients and improve their knowledge and use of medicines.
Proposed quality statement	Community pharmacists should perform a DMR for all patients that are discharged form a secondary care setting with an MDS.
Proposed quality measures	**Process:** Proportion of patients using an MDS supplied by the pharmacy that receive a DMR within 28 days of hospital discharge in the preceding year. Numerator: number of patients with an MDS that receive part 1 of a DMR within 28 days of discharge from hospital. Denominator: number of patients that use an MDS and have been discharged from hospital within the defined period.

5.2.2 Supporting evidence

As documented in standard 5, best practice would be to ensure practices and community pharmacies receive discharge communication that clearly reports that the patient is using an MDS within 24–48 hours of discharge. The discharge prescription would be reconciled with the patient's prescribing screen within another 24–48 hour period, following the reconciliation process documented. It is recognised that this process does not always occur. In a survey by NHS Alliance, 39% of practices reported instances where patient safety had been directly compromised due to discharge information being either late or incomplete. Good communication between pharmacy and the general practice at which subsequent repeat prescriptions are to be issued is paramount. It is good practice for pharmacists to check that the medicines prescribed in one care setting (e.g. in hospital) match those prescribed by the GP when the patient returns to their home. If there are discrepancies, the pharmacist should raise these with the GP. The DMR service formalises this process, and should reduce the risk of medication errors and adverse events occurring.

6.0 PATIENTS USING AN MDS SHOULD HAVE AN ANNUAL ASSESSMENT OF APPROPRIATE AND SAFE USE

6.1 Relevant national recommendation(s) and proposed quality statement

National recommendations	**Targeted Medicines Use Reviews**[16] The introduction of targeted Medicines Use Reviews (MURs) will better utilise the provision of this service and support the care of selected patient groups known to encounter medicines-related problems. From December 2011, in Wales, the target groups are • Patients taking antihypertensive medication; • Patients taking medicines for respiratory disease; • Patients taking high risk medicines; • Patients prescribed a medicine no longer required. MURs will continue to be carried out with patients that are not within the target groups. Pharmacists will be able to provide the service to patients they consider will benefit from the MUR service.
Good practice point	All patients using an MDS should have an annual assessment (or more frequently if circumstances change) of their use of the MDS, i.e. to confirm that it is still appropriate, that it is being used accurately and that medicines not in the MDS are being used properly. This may be an MUR with a community pharmacist or equivalent in a dispensing practice, or as one part of a two-part gold-standard GP medication review.
Proposed quality statement	All patients using an MDS should have an annual (or more frequently if circumstances change) medication review, which includes an assessment of their use and continued need.
Proposed quality measures	**Process:** Proportion of patients living in the community using a MDS that have an annual medication review, which includes an assessment of MDS use and ensures that any MUR actions have been addressed. **General practice:** Numerator: number of patients using an MDS in the community that receive an annual medication review, which includes a documented assessment of MDS use. Denominator: all patients of the general practice that use an MDS. **Pharmacy:** Numerator: number of patients using an MDS in the community that receive an annual MUR. Denominator: all patients of the pharmacy practice that use an MDS.
Target audience	GP and community pharmacy

6.2 Supporting evidence

Patients using an MDS in the community are usually more dependant patients, and are often on complex medication regimes. An MUR targeted at this population offers the opportunity to reassess the frequency of administration and the patients' use of medicines with both the patient and their carer(s).

Experience reported in primary care survey:
"In consultation records there were several comments about patients selectively not taking some medication [from their MDS]. It was noted on one occasion that no carer was available to give medicines over a weekend, and on two occasions of wrong medicines taken by patients"

6.3 Current practice

The primary care survey showed that the typical patient using an MDS is over 80 years of age and taking 7–8 different medicines daily. The records of many patients provided little information on the reason for using an MDS (20% had no recorded reason). Patients tend to use MDS long-term and often do not stop even when circumstances change, for example, moving in with relatives or change in carer(s). Significant numbers of patients are using inhalers, eye drops and analgesics that are not included in their MDS. MURs with these patients may be more problematic as many patients are housebound and carers will need to be involved.

Many patients that use an MDS will fall in to the groups identified as suitable for targeted MURs.

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Appendix 1. Findings from the primary care survey

A short questionnaire was sent to GPs in Torfaen, Monmouthshire and Bridgend requesting information regarding patients on MDS in their practice.

Results from January–March 2011

Out of a total of 119,476 patients across 14 practices, 998 patients (0.8%) were using an MDS. A total of 168 of these patients were in nursing homes. A more detailed survey covered 402 patients using MDS in the community.

Indication

Reasons for using an MDS were given for 336 patients. The most common reasons for adopting a MDS strategy were dementia, and learning difficulties and confusion. There were 14 patient requests. In 20% of patients it was not clear why they were using an MDS.

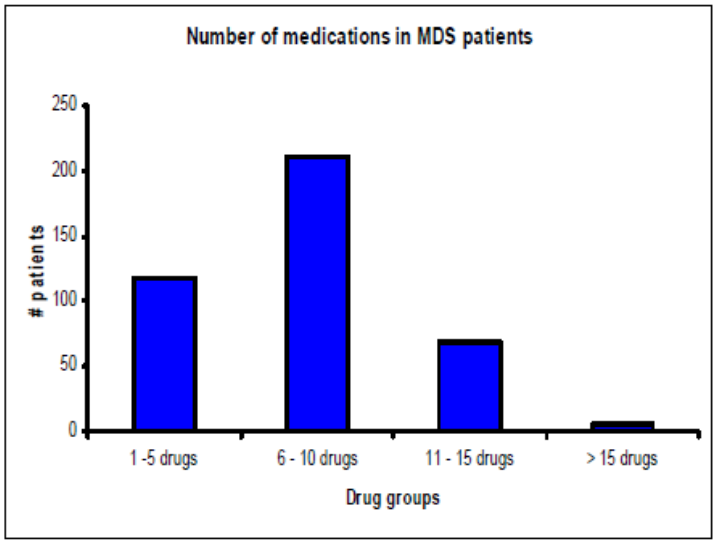
Patient age

Most patients using this system were 76–85 years of age (mean of 81.3 years).

Number of medicines used

Most patients (n = 211) had between 6 and 10 medications (mean of 7.8) included in their MDS tray (see Figure 1). It should be noted however that over half the patients (292/402) also had medicines provided in another way. Medications frequently provided by an alternative method included inhalers (n = 58), eye drops (n = 39) and medicines for pain relief (n = 92).

Figure 1. Number of medicines used by MDS patients.



Number of hospital admissions

Figure 1 shows that there were a total of 308 hospital admissions for the 402 community users over 12 months; the majority of these patients were admitted more than once. A total of 171 patients had no admissions at all.

Table 1. Hospital admissions recorded

Admissions	No. of patients
0	171
1	94
2	37
3	15
4	16
5	5
6	1

Practices generally used either 7-day or 28-day prescribing, rather than a mixture. The data suggests a non-uniform approach to the use of 7-day and 28-day prescriptions. Eight out of eleven practices use 7-day prescribing for patients using an MDS.

The percentage of patients that used an MDS for the practice population varied from 0.5% to 1.95% (mean of 0.83%). Practices with higher use of MDS did not necessarily have greater numbers in nursing homes.

Appendix 2. Survey investigating the use of MDS by patients admitted to Glangwilli General Hospital and Prince Philip Hospital

The survey was designed to answer two questions; firstly, *"How many patients are admitted to Glangwili General Hospital (GGH) and Prince Philip Hospital (PPH) on an MDS?",* and secondly *"What is the frequency of complaints or problems incurred by community pharmacists following patient discharge?"*

As this information is unavailable, it was impossible to demonstrate the efficacy and acceptability of the current system or estimate the impact of any changes proposed by AWMSG. These figures could be used to estimate the potential impact of any changes to the procedure for the discharge of patients using MDS.

METHOD

A point prevalence study was carried out on the 24 May 2011 (GGH) and the 21 June 2011 (PPH). Pharmacists visiting the wards noted the names of patients on the ward that were using an MDS to administer their medications prior to hospital admission (see Figure 1). The total number of patients on the wards visited (the denominator) was obtained from the Myrddin ward system and the frequency of MDS use was calculated, both as a total and by medical and surgical ward subgroup.

A more detailed study of the patients discharged on MDS was then made over the next five working days. The information collected at the point of discharge was: the GP and community pharmacy details; changes to the MDS; date prescription faxed to the GP; whether the hospital dispensed the take-home medication; and any comments from the Dispensary or Medicines Management Discharge Team (see Figure 2). This part of the survey was carried out between 25–29 May 2011 in GGH and 20–24 June 2011 in PPH. The community pharmacy dispensing the MDS was identified and phoned to see if the discharge of the patient had caused them problems. General comments from the community pharmacists relating to the discharge of patients using MDS were also collected.

RESULTS

Point prevalence study

On the 24 May 2011, 259 inpatient (medical and surgical) beds in GGH were visited and 48 patients were recorded as using MDS; an average rate of 18.5 MDS per 100 beds was calculated. The departments excluded were the paediatric and maternity wards, endoscopy, day theatre and the short stay elective orthopaedic ward. On the medical wards, a rate of 20.5 MDS users per 100 beds was calculated, and on the surgical wards, a rate of 15.5 MDS users per 100 beds. On the 21 June 2011, 188 inpatient beds (medical and surgical) in PPH were visited and 24 patients were recorded as using an MDS; an average rate of 12.8 MDS per 100 beds was calculated. None of the patients on the surgical wards were using an MDS.

Detailed study

Over the five-day study in GGH, 18 patients using an MDS were discharged. Of these, three patients had no changes to their prescription and were discharged with their original MDS. In six cases, the discharge team or dispensary did not know whether there were changes to the MDS, or were unable to collect the GP and community

pharmacy details (as a result, these patients were lost to follow up). Nine patients had changes to their MDS on discharge. The discharge team supplied medicines in all nine cases (in one patient this was just the newly prescribed items). In one case, the medicines were dispensed because the ward wanted to discharge the patient before the MDS would be ready from the community pharmacy (48 hours notice was needed). In two cases, the patients moved into a new care setting and the MDS was then provided by the community pharmacy that already provided the service to the nursing/residential home. Only one problem was identified by a community pharmacist: the GP delivered the prescription to the community pharmacy at 4.55 pm on a Friday evening; the hospital had faxed the discharge summary/TTH on the Thursday and the patient didn't have any medication for the weekend.

In PPH, over the five-day study period, four patients using MDS were discharged. All patients had changes to their prescription and medicines dispensed. The community pharmacists were contacted for three patients and no problems with these discharges were reported. In the remaining case, the discharge prescription had to be re-faxed to the community pharmacy.

General comments on the discharge of MDS patients
The following comments were offered during the follow-up telephone call to the community pharmacists:

- *They are still given short notice that an MDS is required and sometimes the community pharmacy does not receive a fax. Some GPs are requesting 48–72 hours to issue a prescription as is standard practice.*
- *The ward staff need more education: in particular that the community pharmacists cannot release the MDS on the basis of the faxed discharge summary/TTH; they have to wait for the GP's prescription.*
- *Carmarthenshire carers (from Health and Social Services) require their clients to use MDS, while Ceredigion carers do not.*
- *The community pharmacists do not use the medication supplied by the hospital to refill the MDS because they cannot guarantee the medication stability since they cannot control how it has been stored, as set out in professional standards on reuse of medicines.*
- *There are still problems with the hospital starting patients on an MDS: there is rarely information on who took the decision, no appropriate assessment (Disability Discrimination Act) and GPs are therefore reluctant to issue seven-day prescriptions as requested by the community pharmacist supplying the tray at the request of the hospital.*
- *Discrepancies have occurred between the faxed discharge summary and the discharge summary received by the GP surgery by post. This is feasible because changes may occur in the last 48 hours of hospital care before the patient is discharged.*
- *The community pharmacists would like to know when there are no changes to an MDS after patients have been admitted to hospital. The delay in discharge paperwork reaching the GP surgery may mean that the patient requires a new MDS in the meantime, and the community pharmacist and GP are reliant on the family/carers information only.*

DISCUSSION

The average rate of 18.5 MDS users per 100 beds was higher than expected. The rate of MDS use was higher on the medical wards (20.5 per 100 beds).

The discharge team and dispensary (GGH) identified the discharge of 18 MDS users over a five-day period (an average of 3.6 MDS per day). PPH discharged four MDS users over the five-day period with the comment that this seemed a lower figure than they expected. These figures should be used to estimate the potential impact of any additional work that changes to the procedure for the discharge of patients using MDS may cause.

Out of thirteen MDS discharges that were followed up, two caused significant problems to the community pharmacy. However, from the data collected, one problem arose from greater than anticipated delays in the GP practice generating the WP10 prescription.

In twelve discharges, where the MDS prescription was changed, the hospital dispensed all or part of the medication. This medication, as well as potentially causing confusion to the patient, does not appear to be reused by community pharmacists due to current recommendations of not re-dispensing medicines. This results in duplication of work and waste of medication, and further guidance would be useful on when it is appropriate (if at all) for a community pharmacist to re-use a patient's own medicines in a similar manner to the hospitals.

CONCLUSION

The main driver for the use of MDS in the Carmarthen area appears to be the current need for patients under the care of Health and Social Services with domiciliary care to have their medicines provided in an MDS. The total costs of this policy should be quantified, and discussion between the health and social care communities should take place to determine whether MDS are the most cost-effective way of achieving compliance with treatment in these patients.

Progress has been made in Ceredigion, where the need for an MDS is no longer a priority but only a consideration in the patient's assessment.

Different systems operate throughout Hywel Dda, and there is an ongoing review to implement best practice from other the sites within Hywel Dda.

It has highlighted potential problems with transfer of patients between hospital and the community.

While the data gathered showed a low number of problems, the survey did not assess what problems were encountered by the patient when discharged with bottles and boxes of medicines instead of their accustomed MDS. To overcome the relatively low number of patients in the survey, the detailed survey could be repeated and continued for longer.

Acknowledgements
Pharmacists and technicians at Glangwili General Hospital and Prince Philip Hospital.

Figure 1. Carmarthenshire MDS point prevalence study

Ward …… Date …… Pharmacist/Technician ……

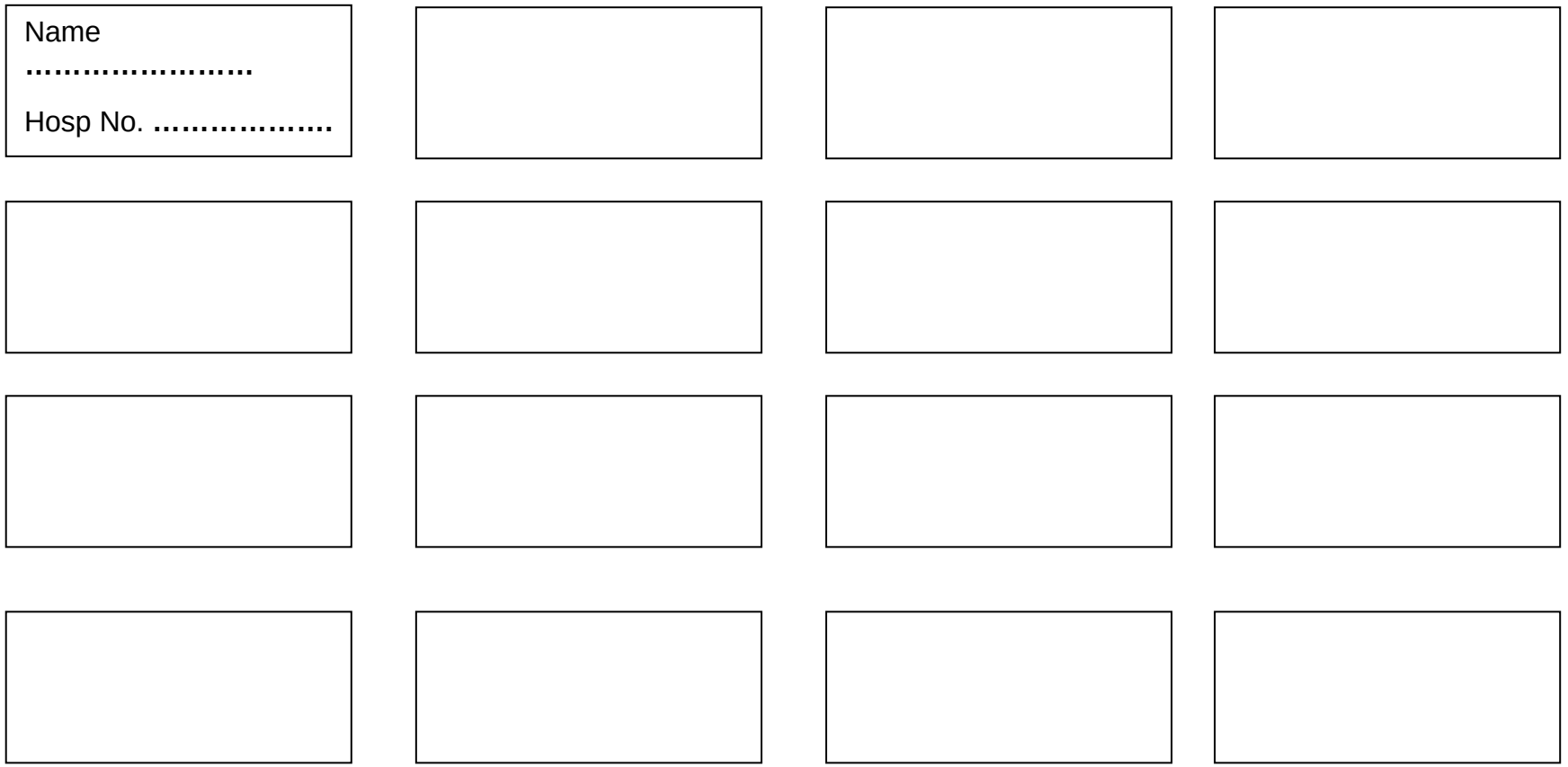


Figure 2. Information collected at the point of discharge

	Ward	Date		Changes Y or N	Comments	Date faxed to GP	TTH dispensed	Community pharmacist contacted
			GP name + tel no: Community pharmacist name+ tel no:					
			GP name + tel no: Community pharmacist name + tel no:					
			GP name + tel no: Community pharmacist name+ tel no:					