Report of the Regional Steering Group on Medicines Adherence

March 2012
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This document can be made available on request and where reasonably practicable in an alternative format, Easy Read, Braille, audio formats (CD, mp3 or DAISY), large print or minority languages to meet the needs of those for whom English is not their first language.
Executive Summary

Introduction
The HSCB Commissioning plan describes the continuing modernisation and reform of the Health and Social Care system, responding to growing demand with an increased emphasis on community based services. An important element within the plan is to promote older people’s health and wellbeing, through a further shift to supporting people at home promoting rehabilitation, self-care and independence. Good medicines management and improved adherence to prescribed medicines will be essential to support these re-ablement objectives.

People over 65 years old receive an average of 55 prescription items per year and 36% of older people take four or more medicines regularly. Those with chronic illness have levels of non-adherence with their treatments as high as 50% leading to a reduction in expected clinical outcomes of therapy and a higher risk of avoidable medication-related hospital admissions. For some chronic conditions e.g. diabetes, hypertension, increased drug utilization can provide a net economic return when it is driven by improved adherence with guidelines-based therapy. The NHS costs of hospital admissions resulting from people not taking medicines as recommended were estimated at £36-196 million in 2006-7.

Opportunities exist to reduce waste and improve adherence to medicines through providing support to people with medicines-taking and ensuring that medications are effectively reviewed and managed.

Non-adherence to medicines
Achieving the best outcome from prescribed medication is the final step in the process of diagnosing and treating medical problems. It is essential that people receive the right drug for the right indication at the right dose at the right time and adhere to the prescribed therapy. Intentional or non-
intentional non-adherence results in treatment failure and possible harm to the person. Barriers to adherence include cognitive problems, poor organisational skills, taking too many drugs and difficulty accessing medicines. The evidence base indicates that interventions which improve adherence are complex and multifaceted for example, medication review followed by telephone reminders combined with education about medicines. There is some evidence that these interventions are cost-effective.

**Current Service Provision**

In NI there is currently no commissioned service to support medicines adherence. A limited Managing Your Medicines service is available within community pharmacy. Domiciliary care services commissioned by Trusts include support for medicines taking.

Current legislation (Equality Act 2010) requires that reasonable adjustments are made to services for the provision of medicines to disabled people to enable them to access their medicines.

**Regional Steering Group on Medicines Adherence**

A regional steering group representing multiple health and social care stakeholders in HSC Trusts and primary care in all Local Commissioning Group (LCG) areas was convened. It aimed to improve outcomes from prescribed medicines by ensuring safety and quality in the provision of adherence support for mental health patients and older people who are living in their own homes. The objectives were:

- To define the patient pathway from assessment to provision and review;
- To develop an assessment tool to identify need for adherence support;
- To develop a service model and specification for commissioning a adherence support service from community pharmacy;
To develop regional guidance for domiciliary care agencies who provide support for medicines administration;

To develop regional training and medicines administration record systems for medicines administration in domiciliary care settings;

To reduce demand for monitored dosage systems to be supplied for all patients in receipt of domiciliary care services.

Four subgroups were convened to consider:

1. Patient Care Pathways (both primary and secondary care)
2. Assessment Tool and Referrals (both primary and secondary care)
3. Training and Competency Assessment (domiciliary care staff)
4. Solutions (community pharmacy)

**Proposed Service Provision**

Consensus was reached on the need for a regional medicines adherence support service and the potential structure of care pathways and solutions. The regional group recommended that a medicines adherence service is commissioned which includes the following elements:

**a. Referral into the service**

A system of referral will be set up to identify people who are not specifically identified in the current system and who exhibit poor adherence to medicines. People will be identified by staff in health and social care and referred, with their consent, for a medicines adherence assessment.

**b. Assessment of patients for adherence support**

A medicines adherence assessor, who may be based in a community or hospital setting, will conduct a detailed assessment of the person and their family / carer to identify problems with intentional and/or non-intentional adherence.
An assessment tool will be developed and used to identify problems with medicines management and map them to evidence-based solutions e.g. adherence support from community pharmacy, referral to GP, domiciliary care worker assistance with medicines (for people being assessed through care management).

c. **Medicines Adherence Support Solutions**

The medicines adherence support solutions will usually be provided by the community pharmacist. In some cases, people may be referred for further assessment of care management needs or to other services appropriate to the specific problems identified; e.g. referral to GP for clinical or medication review.

Training specifications for medicines management in domiciliary care will be developed regionally. Trust representatives have agreed to share existing materials and participate in the development of suitable regional training materials in conjunction with HSCB staff.

d. **Monitoring and Review**

At each dispensing episode the community pharmacist will monitor the person’s progress to identify any ongoing problems with medicines adherence. They may refer back to the assessor as necessary if the solution is not meeting the person’s needs or if circumstances change.

**Recommendations**

The subgroups made 30 recommendations which are detailed in the main body of the report. These cover the issues raised by stakeholders including care pathways in primary and secondary care settings, development and administration of a regional medicines adherence assessment tool, feasibility of the provision of medicines adherence solutions, timeliness of service provision, training and competency assessment of domiciliary care workers who assist people with medicines, monitoring and review,
appropriate methods of addressing intentional non-adherence, particularly in people with mental illness, legal and governance implications of the service model, roles and responsibilities of all staff and agencies involved in the service model guidance for staff, business planning and post-project evaluation.

Conclusion
The project benefited from enthusiastic engagement from the Steering group members and the stakeholders. Consensus was reached on the need for a regional solution and the structure of the service.

A business case should now be developed to secure the funding and resources necessary to take forward the service development for the proposed adherence service model. Where possible, in tandem with the business case, the specific recommendations should be progressed in preparation for full implementation of the medicines adherence service to achieve the project aim of “improving outcomes from prescribed medicines by ensuring safety and quality in provision of adherence support for mental health patients and older persons who are living in their own homes”.
Introduction

Over the next 10 years, the population of Northern Ireland (NI) will increase by 142,000 people (8%). The Health and Social Care Board /Public Health Agency Commissioning Plan 2011/12, recognises that the average age will continue to increase at a faster rate than the overall population. Specifically, estimates are that between 2008 and 2020, the number of people aged over 75 years will increase by 40%. The Commissioning plan describes the continuing modernisation and reform of the Health and Social Care system, responding to growing demand with an increased emphasis on community based services. An important element within the plan is to promote older people’s health and wellbeing, through a further shift to supporting people at home and giving individuals, their family and local communities, greater control over the range and delivery of services. A key priority is the reshaping of social care services with the introduction of the re-ablement model and other measures to significantly increase the proportion of people cared for at home rather than in residential care. The re-ablement model promotes rehabilitation, self care and independence. Good medicines management and adherence to prescribed medicines will be essential to support the objectives of re-ablement.

In NI there are over 35 million prescription items dispensed each year. People over 65 years old receive an average of 55 prescription items per year and 36% of older people take 4 or more medicines regularly. As people age, their use of medicines will increase due to the development of long term medical conditions and more preventative prescribing. People with chronic illness have levels of non-adherence with their treatments as high as 50% leading to a reduction in expected clinical outcomes of therapy and a higher risk of avoidable medication-related hospital admissions (Green 2000, Howard 2003, Pirohamed 2004). For some chronic conditions e.g. diabetes, hypertension, increased drug utilization can provide a net
economic return when it is driven by improved adherence with guidelines-based therapy (Sokol 2005). The NHS costs of hospital admissions resulting from people not taking medicines as recommended were estimated at £36-196 million in 2006-7 (NICE, 2009).

Furthermore, there is waste - a recent study (York Health Economics [YHE] Consortium /School of Pharmacy, University of London, 2010) estimated that the gross annual cost of NHS primary and community care prescription medicines wastage in England is currently in the order of £300 million per year; this equates to approximately £16-18m in NI. Patients with chronic illness are increasingly being managed in primary and community care settings. Invariably, such patients are receiving a range of medicines and they or their carers must manage sometimes quite complex medicines regimes. The YHE report recommended that more effort should be focused on applying psychological and related medicines-taking research findings to the development of practical interventions capable of cost effectively improving drug use, and where possible reducing waste in day-to-day settings. Opportunities for the reduction of medicines waste include:

- providing targeted support for patients starting new therapies, and those on unusually costly and/or difficult to take treatments and supporting high quality prescribing, and
- ensuring that medication and associated treatment regimens are effectively reviewed by doctors, pharmacists and, when desirable, other professionals There is good quality evidence that extending nationally or locally funded services of this type could reduce waste and contribute other benefits

The Health and Social Care Board (HSCB) convened an introductory workshop in September 2010 representing multiple health and social care stakeholders in HSC Trusts and primary care in all Local Commissioning Group (LCG) areas to explore the difficulties that patients experience with
taking their medicines. At the workshop it was decided that the following stakeholders needed to be included in this project:

- all five Trusts with a range of representatives;
- community pharmacists;
- Regulation and Quality Improvement Authority (RQIA);
- domiciliary care agencies;
- GPs;
- patient representatives;
- social services;
- a commissioner from the HSCB;
- HSCB pharmacy and medicines management staff.

A regional steering group was convened in April 2011 following the workshop. Membership of the regional steering group is detailed in Appendix 1.

The aim of the project was to improve outcomes from prescribed medicines by ensuring safety and quality in provision of adherence support for mental health patients and older persons who are living in their own homes.
Summary of research evidence on non-adherence to medicines

Definition of adherence

Adherence is defined as “the extent to which a person’s behaviour coincides with medical or health advice” (Haynes 1979). A useful distinction can be made between individuals who do not start a medication (treatment refusal) and those who start the course but either take medication incompletely (partial adherence) or discontinue prematurely against medical advice (Figure 1). Synthesising data on adherence behaviour is difficult because of the wide range of assessment methods and advice that patients actually receive (Mitchell 2007).

![Figure 1. Systematic classification of adherence behaviour (Mitchell 2007)](image-url)
Non-Adherence to Medicines

Achieving the best outcome from prescribed medication is the final step in the process of diagnosing and treating patient’s medical problems. It is essential that the patient receives the right drug for the right indication at the right dose at the right time and adheres to the prescribed therapy. Non-adherence to medicines results in treatment failure and possible harm to the patient.

Medicines–related harm can occur in three main ways. Firstly, it can be due to the inherent pharmacological nature of the drug substance itself, causing adverse drug events or not having an adequate pharmacological effect on a particular patient. Secondly, it can be due to errors made by healthcare professionals e.g. prescribing errors, dispensing errors or administration errors. Thirdly, patient’s actions can result in therapy failure. On average, 50% patients do not adhere to prescribed medication (Green 2000, Howard 2003, Pirohamed 2004). The problems can be partially addressed firstly by stopping or changing the prescribed therapy and secondly through working on redesigning and improving systems within healthcare to manage medication. The largest cause of treatment failure is non-adherence to medication by patients. Non-adherence to prescribed medication may be intentional or non-intentional.

Intentional non-adherence may be due to non-belief in drug therapy i.e. the patient believes the drug is not needed, is ineffective or that too many drugs are being taken. It occurs when there is a lack of information about the advantages and disadvantages of the treatment, when the benefits of the treatment are not obviously apparent or when psychological adaptation is required to see oneself as in need of treatment. (Atkins and Fallowfield, 2006). It can also be due to the intentional misuse of drugs or the active avoidance of unpleasant side effects.

Non-intentional non-adherence can be due to physical problems such as difficulty in taking medicines e.g. opening bottles, swallowing etc. or
cognitive problems such as memory impairment or poor organisational skills (Steinman and Hanlon, 2010).

Barriers to medicines adherence include taking many drugs (polypharmacy) e.g. for long-term medical conditions or too many drugs (inappropriate polypharmacy) e.g. the “prescribing cascade”, where side effects are treated with medication instead of removing the causal agent. Difficulties with access to medicines can reduce adherence to medication in cases where the distance from the patient’s home to the GP surgery or community pharmacy is large and/or where transport problems exist.

**Interventions to improve adherence to medicines**

A Cochrane systematic review of nine studies (Haynes 2008) examined interventions for enhancing medication adherence. Almost all that were shown to be effective for long-term care were complex, including combinations of providing patients with more convenient care, information, reminders, self-monitoring, reinforcement, counselling, family therapy, psychological therapy, crisis intervention, manual telephone follow-up, and supportive care. However, even the most effective interventions did not lead to large improvements in adherence and treatment outcomes.

Other systematic reviews (Box 1) have also indicated that intervention methods used to improve medication adherence were complex and labour-intensive and were not predictably effective.

No strong evidence has been published in favour of a particular strategy or intervention type. In general, multifaceted interventions were often more effective. Healthcare outcomes and clinical effectiveness were seldom addressed in the studies available to date.

Evidence from systematic reviews indicates that adherence to medication has consistently increased with the following intervention types:

- Behavioural interventions which reduced dosing demands
- Interventions with large effect sizes
- Interventions involving monitoring patients and feedback
- Multi-sessional information interventions
- Combination of interventions e.g. more convenient care, medicines information, reminders, self-monitoring, reinforcement, counselling, family therapy, psychological therapy, crisis intervention, telephone follow-up and supportive care.

**Cochrane systematic review:**

**Other systematic reviews:**
- McDonald et al. JAMA 2002; 288(22): 2868-79
- van Eijken et al. Drugs & Aging 2003; 20(3): 229-240
- Peterson et al. AJHP 2003; 60(7): 657-665
- Higgins et al. Age and Ageing 2004; 33 (3)

**Recent papers /abstracts:**
- Dunlop et al. All Ireland Pharmacy Conference abstract 2011
- Steinman and Hanlon. JAMA 2010; 304(14): 1592-1601
- Doggrell et al. Drugs & Ageing 2010; 27(3): 239-254

**Box 1. References to reviews on interventions to improve medicines adherence**

A recent Cochrane review (Mahtani et al., 2011) on the use of reminder packaging for improving adherence to self-administered long-term medications found that the use of reminder packaging reduced diastolic blood pressure in patients with hypertension (2 studies), reduced glycated haemoglobin (2 studies) in diabetic patients and increased the percentage of pills taken by 11% (4 studies) although there was notable heterogeneity in the studies. Reminder packaging (including monitored dosage systems, multi-compartment compliance aids, unit dose systems and calendar packaging) was used in conjunction with pharmaceutical care or patient
education and the authors concluded that it may represent a simple method for improving adherence in patients with selected conditions.

Monitored dosage systems (MDS) are a method of supporting people with complex regimens who are becoming confused and are at risk (Pruce 2011); they are commonly used in NI. Several types of MDS are available but they are of variable usefulness as compliance aids (Ala 2010). Few MDS have all the ideal features to improve poor adherence to medicines (Box 2).

- Easy for the patient to use
- Clearly identifies patient and medicine(s) in each section
- Shows when the medicines should be taken
- Sealed and tamper-evident to show if medicine has been taken and to prevent accidental spillage
- Protects against moisture and contamination
- Contains ALL oral medicines, both solids and liquids with the exception of “as required” (prn) medicines
- Allows transportable individual doses for days out

*Box 2. Features of an ideal monitored dosage system (MDS) for poor adherence*
The economic case for a medicines adherence support service

Drug-related hospital admissions account for approximately 10% of all admissions and two thirds of these are thought to be preventable (Barber, 2004), representing a considerable economic resource.

Effective interventions to improve medication adherence play an important role in reducing hospital admissions. Elliott et al. (2008) conducted a proof of concept study where patients were telephoned two weeks following hospital discharge and given advice and information on taking their medicines. At 6 months, the evaluation of the service indicated that non-adherence fell from 16% to 9% and reported drug-related problems fell from 34% to 23%. Cost-effectiveness modelling showed that the intervention was cost-effective. The findings suggested that pharmacists can meet patients’ needs for information and advice on medicines, soon after starting treatment with a reduced overall cost to the health provider. A “new medicines service” based on this evidence was recently introduced in community pharmacies in England (October 2010).


The Equality Act 2010 aims to protect disabled people and prevent disability discrimination. It provides legal rights for disabled people in areas including access to goods, services and facilities. In the Act a person has a disability if they have a physical or mental impairment which has a substantial and long-term adverse effect on their ability to perform normal day-to-day activities. Thus, it requires pharmacists and prescribers to make “reasonable” adjustments to their services to support patients with taking their medication.
Regulations, Minimum Standards and Guidance on Medicines Management in Domiciliary Care

The Health and Personal Social Services (Quality, Improvement and Regulation) (Northern Ireland) Order 2003 Article 38 conferred powers on the DHSSPS to prepare, publish and review statements of minimum standards of all services. In addition, the Order allowed for the establishment of the Regulation and Quality Improvement Authority (RQIA) (Appendix 3).

The DHSSPS has developed minimum standards for a range of regulated services including Domiciliary Care Agencies. The regulations and minimum standards have been prepared in response to extensive consultation. They are the minimum provisions below which no provider is expected to operate.

The RQIA Guidelines For The Control And Administration Of Medicines, Domiciliary Care Agencies (Jan 2009) document was written with reference to The Domiciliary Care Agencies Regulations (Northern Ireland) 2007, the DHSSPS minimum standards and guidelines issued by the Commission for Social Care Inspection (CSCI).

The RQIA guidelines provide advice on the management of medicines by Domiciliary Care Agencies, with the aim of promoting the safe and effective use of medicines and ensuring that suitable and high quality care is provided to service users. They will help agencies and the workers they employ to achieve compliance with the regulations and standards for medicines management. Criteria relating to medicines management covered by RQIA guidance are:

- Referral
- Levels of assistance/consent
- Multi-agency provision
• Care plans
• Policies and procedures
• Administration of medicines
• Training and competency assessment
• Training in specific techniques
• Record keeping
• Storage of medicines
• Errors, incidents and audit

RQIA guidance is also provided on:
• Levels of support
  o Level 1 – General support or assistance with medication
  o Level 2 – Administering medication
  o Level 3 – Administering medication by specific technique
• Monitored dosage systems
• Controlled drugs
Medicines Adherence Support Services

No national service to support medicines adherence is available in the UK or Republic of Ireland. A number of medicines adherence support services which have been commissioned in Cardiff, Devon and in Neath and Port Talbot were identified and looked at by the group by way of example.

Cardiff

Home carers referred those patients who required an assessment to the home care manager. The home care manager liaised with a nominated pharmacist and together they produced a joint care plan which involved a medication reminder chart for the patient’s or carer’s use. Carers trained by the pharmacist helped to administer medication in the patient’s own home. Patient reviews were carried out by the pharmacist and home care manager (Pike 2004).

Devon

The aim of the Devon service was to improve management of patients with long term conditions or complex care needs in the community. It operated within primary care “clusters” and involved collaboration between a local hospital Trust and multidisciplinary health and social care teams. There was a single assessment process which identified if support was needed for people with disabilities and those patients identified as needing help with their medicines were visited by a domiciliary care pharmacist. Pharmacists carried out a medication review and prepared an action plan. (Dilks and Nash 2008)

Neath & Port Talbot

A service to assist people with prescribed medicines in the domiciliary care setting operates in the Neath and Port Talbot area of Wales. Service users’
medication management needs are assessed with their consent and different levels of support are provided. These are:

Level A – no support required from the care worker

Level B – the service user retains responsibility for their medicines but may need directed assistance from the care worker e.g. if the problem is cognitive in nature, reminders to take medicines using, where possible, reminder charts, telephone calls etc. or if physical in nature, assistance is offered to open medication packaging or to order or collect medication.

Level C – service users have been assessed at this level to be unable to manage their own medicines and the care worker is required to assist with and be responsible for their medication. The service user is encouraged to engage with the care worker throughout the process of medicines management but the care worker remains responsible for selecting and administering the appropriate medication as per the instruction on the medication label and the MAR chart.

For those service users who are prescribed complex regimens, defined as 8 or more medicines at any one dose time, the medicines management nurse is contacted to do a risk assessment and review (Neath and Port Talbot 2011).
Services to support medicines adherence currently provided in Northern Ireland

In NI there is currently no commissioned service to support medicines adherence. A limited Managing Your Medicines service is available within community pharmacy, targeted at patients who receive four or more long-term medicines. There are some patients who receive their dispensed medicines in MDS boxes through this service.

In the absence of a commissioned service to support adherence, medicines are supplied by community pharmacists in MDS boxes to assist patients, families and formal carers with administration of medicines. In the past the supply of medicines in MDS packaging was often viewed as being partially financially supported by the fees paid for Multiple Dispensing, however, this is not the intended purpose of this exception facility which is defined in the NI Drug Tariff.

The NI Drug Tariff defines Multiple Dispensing as;

“the supply, by a pharmacist, of part of the total quantity of a prescription-only-medicine, at set intervals (e.g. weekly or daily) as requested in writing by the GP or other authorised prescriber. Multiple Dispensing is an “exception” facility for use where the prescriber considers that it is essential to protect the well-being of the patient (to prevent abuse, misuse or life-threatening non-compliance) that installments of the drug prescribed should be supplied to the patient at stated intervals. The prescriber may endorse the prescription to that effect in those circumstances. It must be clearly indicated on the prescription which item(s) require Multiple Dispensing and which are for normal dispensing. Prescribers should exercise caution with computer-generated and repeat prescriptions.

Multiple Dispensing fees are not payable in respect of:-

(i) prescriptions for patients registered for review of medication under the Managing your Medicines scheme (for which separate payments apply); or

(ii) presentation of medication(s) in compartmentalised Monitored Dosage Systems trays (Managing your Medicines scheme payments may apply).”
Prescription data for NI indicates the growth in the dispensing fees for ordinary prescription items and multiple dispensing over time (Table 1). The proportion of the total dispensing fees which were paid for multiple dispensing increased from 5.06% in 2003/04 to 16.89% in 2010/11 (Table 2). Multiple dispensing is in use throughout all parts of NI. Although it is recognised that some multiple dispensing prescriptions are dispensed into MDS, multiple dispensing fees include those paid for all forms of instalment dispensing e.g. daily dispensing for vulnerable patients or opiate withdrawal programmes. As dispensing into an MDS is not a commissioned service, the data is not readily available. It is not possible to separate the volume associated with dispensing into MDS to assist adherence from other reasons for instalment dispensing.

Table 1. Growth in Multiple Dispensing Fees in NI 2004 - 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>Ordinary</th>
<th>Multiple</th>
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<tr>
<td>2004/2005</td>
<td>2.90%</td>
<td>19.63%</td>
</tr>
<tr>
<td>2005/2006</td>
<td>3.51%</td>
<td>6.58%</td>
</tr>
<tr>
<td>2006/2007</td>
<td>3.44%</td>
<td>26.24%</td>
</tr>
<tr>
<td>2007/2008</td>
<td>3.93%</td>
<td>34.05%</td>
</tr>
<tr>
<td>2008/2009</td>
<td>4.48%</td>
<td>37.93%</td>
</tr>
<tr>
<td>2009/2010</td>
<td>5.07%</td>
<td>42.37%</td>
</tr>
<tr>
<td>2010/2011</td>
<td>6.21%</td>
<td>20.24%</td>
</tr>
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Table 2. Dispensing Fees for “Ordinary” and “Multiple Dispensing” in NI 2003 - 2011

<table>
<thead>
<tr>
<th>Year</th>
<th>“Ordinary” Prescription fees</th>
<th>Multiple Dispensing fees</th>
<th>Total dispensing fees</th>
<th>% Multiple dispensed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003/2004</td>
<td>25,495,212</td>
<td>1,357,636</td>
<td>26,852,848</td>
<td>5.06%</td>
</tr>
<tr>
<td>2004/2005</td>
<td>26,233,851</td>
<td>1,624,143</td>
<td>27,857,994</td>
<td>5.83%</td>
</tr>
<tr>
<td>2005/2006</td>
<td>27,155,425</td>
<td>1,731,028</td>
<td>28,886,453</td>
<td>5.99%</td>
</tr>
<tr>
<td>2006/2007</td>
<td>28,088,286</td>
<td>2,185,256</td>
<td>30,273,542</td>
<td>7.22%</td>
</tr>
<tr>
<td>2008/2009</td>
<td>30,498,500</td>
<td>4,040,331</td>
<td>34,538,831</td>
<td>11.70%</td>
</tr>
<tr>
<td>2009/2010</td>
<td>32,045,820</td>
<td>5,752,320</td>
<td>37,798,140</td>
<td>15.22%</td>
</tr>
<tr>
<td>2010/2011</td>
<td>34,036,334</td>
<td>6,916,733</td>
<td>40,953,067</td>
<td>16.89%</td>
</tr>
</tbody>
</table>
If patients transferring from one care setting to another, e.g. across the primary/secondary care interface, are identified as having problems managing their medicines they may be given a medicines reminder card or advised to purchase a compliance aid to help organise their medicines.

There has been an increased focus on provision of care in community settings and in patients’ own homes rather than in hospitals. Domiciliary care services are provided to support an individual in their own home. Services may involve routine household tasks within or outside the home, personal care of the client and other associated domestic services necessary to maintain an individual in an acceptable level of health, hygiene, dignity, safety and ease in their home. They are provided by the independent and statutory sector. Medicines constitute an important part of provision of care and clients who need help with taking their medicines receive support from domiciliary care. The DHSSPS undertake an annual survey of domiciliary care services provided to adults and during a survey week in September 2010 they reported the following information:

- An estimated 233,273 contact hours of domiciliary care were provided by HSC Trusts in NI, 1% (2,286) less than during the survey week in 2009 (235,559).
- An average of 10.0 domiciliary care contact hours were provided per client in NI, similar to the average during the survey week in 2009 (10.1).
- HSC Trusts provided domiciliary care services for 23,389 clients in NI, similar to the number during the survey week in 2009 (23,377).
- 7,346 clients received intensive domiciliary care services, 11% (716) more than during the survey week in 2009 (6,630).
- The majority (85%) of clients receiving intensive domiciliary care services were aged 65 & over, with 15% of clients aged 18-64.
• Just over two thirds (68%) of all clients receiving domiciliary care services received 6 or more visits, similar to the proportions reported in the 2008 and 2009 surveys.

This information provides an indication of the number of older people receiving domiciliary care services and the increased intensity of the care provided. From this survey, it is not possible to determine the proportion of the visits that included support with medicines taking.
Providing a Medicines Adherence Service in NI: Work of the Regional Medicines Adherence Steering Group

The Regional Steering Group met in April 2011 to consider the evidence published on non-adherence to medication and interventions to address the problem. The regional group identified a set of objectives:

1. To define the patient pathway from assessment to provision and review;
2. To develop an assessment tool to identify need for adherence support;
3. To develop a service model and specification for commissioning an adherence support service from community pharmacy;
4. To develop regional guidance for domiciliary care agencies who provide support for medicines administration;
5. To develop regional training and medicines administration record systems for medicines administration in domiciliary care settings;
6. To reduce demand for monitored dosage systems to be supplied for all patients in receipt of domiciliary care services.

Four subgroups were subsequently convened to consider different strands of service development:

1. Patient Care Pathways (both primary and secondary care) as stated in objective 1
2. Assessment Tool and Referrals (both primary and secondary care) as stated in objective 2
3. Training and Competency Assessment (domiciliary care staff) as stated in objectives 4 & 5
4. Solutions (community pharmacy) as stated in objective 3
Objective 6 will be addressed when an alternative range of medicines adherence solutions in addition to MDS becomes available.

Membership of the subgroups is included in Appendix 1 and a report of the subgroup discussions is included as Appendix 2.
Overview of proposed medicines adherence support service based on the work of the subgroups

The work of the subgroups has led to a proposed service description which would achieve improvements in quality and safety and reduced waste through improved medicines adherence for all people who have been assessed as requiring assistance with medicines management. The target groups most likely to benefit from a medicines adherence service are those with polypharmacy or complex medication regimens such as those with chronic disease or multiple co-morbidities, older people and people with mental illness or cognitive impairment. Other groups may include those with visual impairment or communication difficulties. The service will be open to all patients who have been identified as having problems with managing their medicines. It supports the re-ablement model which promotes rehabilitation, self-care and independence.

a. Referral into the service

Patients will be identified by staff in health and social care and referred, with their consent, for a medicines adherence assessment. Problems identified by family and carers will be referred through health and social care professionals. A referral form including the trigger questions for problems with medicines management used in the NISAT core assessment, domain 4 will be made available to all health and social care staff. In cases where referral for assessment is made by the patient’s GP it is hoped that all referral forms could be sent electronically.

b. Assessment of patients for adherence support
The medicines adherence assessor, who may be based in a community or hospital setting, will conduct a detailed assessment of the patient and their family / carer to identify problems with intentional and/or non-intentional adherence.

The assessment tools subgroup has designed an assessment tool such that problems with medicines management can be identified and mapped to solutions. The range of possible outcomes from the assessment is illustrated in Figure 2. The assessor will complete a medicines adherence care plan which will include recommendations for;

- Adherence support solutions
- Referral to other services
- Domiciliary care worker assistance (for patients/clients being assessed through care management)

c. **Medicines Adherence Support Solutions**

i. **Medicines Adherence Support Solutions from Community Pharmacy**

The medicines adherence support solutions that are recommended following assessment will usually be provided by the patient’s community pharmacist. The solutions subgroup has developed a list of solutions that can be made readily available through community pharmacies e.g. provision of a “medicines reminder card”, large print labels etc. The pharmacist may be required to supply a medication administration record (MAR) chart to record the doses of medicines taken either for use of the patient, their family or carer or domiciliary care worker. In some cases a monitored dosage system (MDS) may be supplied.

ii. **Domiciliary care worker assistance with medication**

If the medicines adherence assessor concludes that the patient may benefit from personal assistance with medicines e.g. in the case where no family
member or carer is available to assist, this will be recommended to the Care Manager / Social Care assessor or equivalent on completion of the Medicines Adherence Care Plan for patients who are being assessed for care management needs. If the patient is not being assessed for care management and their needs cannot be met through the other available solutions, the patient may be referred to their GP for consideration of their wider social care support needs.

It is anticipated that different levels of domiciliary care worker assistance with medicines will be required depending on the ability of the patient as described in Figure 2. It is intended that regional training specifications for medicines management in domiciliary care will be developed. Trusts have agreed to share and develop suitable regional training materials in conjunction with the HSCB.

iii. Referral to GP or other services

The assessment tool will identify medicines adherence problems and recommend that a referral is made to other services appropriate to the specific problems identified; e.g. referral to GP for clinical or medication review, or to physical disability teams for dexterity problems.

d. Monitoring and Review

The assessor will specify a review period and share the assessment outcome (with the patient’s consent) with the patient’s GP and the relevant health and social care staff. The community pharmacist providing the adherence solution will monitor the patient’s progress at each dispensing episode to identify any ongoing problems and may refer back to the assessor as necessary if the solution is not meeting the patient’s needs or if circumstances change.
Figure 2. Post-Assessment Medicines Adherence Decision Tree

**Key:** DCW = Domiciliary Care Worker; MAR = Medicines Administration Record; MDS = Monitored Dosage System; Complex = to be defined in guidance
Outstanding issues raised by the Regional Steering Group

Mental health

Although the aim of the project is to develop services for mental health patients living in their own homes as well as for older people, there was insufficient representation within the steering group for services for mental health patients to be thoroughly considered. The assessment tool and solutions were designed to identify and address non-adherence that is primarily non-intentional in nature e.g. missed doses, taking extra doses etc. There may be complex issues for mental health patients related to adherence including intentional non-adherence. These patients may be identified in the assessment and referred to more appropriate services e.g. psychiatry services.

Recommendation

- Further work should be undertaken to look at the most appropriate methods of addressing intentional non-adherence, particularly in patients with mental illness.

Provision of medicines adherence solutions from secondary care

The subgroups have considered the provision of medicines adherence in primary and community care in depth. They expressed the view that there should be no delay in obtaining appropriate solutions for patients to support adherence following discharge from hospital and would like to see Trusts providing solutions e.g. MAR charts and MDS where appropriate. The provision of MDS by secondary care is challenging and would require additional resources.

The pathway for assessment of intermediate care patients was difficult to describe because some patients come from hospital into intermediate care (step down) and others come from the community (step up). Given the
variation in intermediate care schemes, there is still a need to consider the needs of these patients within the hospital and community pathways.

Recommendations

1. Further work should be undertaken to explore the capacity of Trust pharmacy departments to produce MAR charts.
2. The needs of intermediate care clients/patients should be considered within the hospital and community pathways.

Legal and Governance Implications

All of the working groups raised concerns that any legal or governance implications should be considered in detail at an early stage of the implementation process. This should seek to ensure compliance with all relevant legislation and good practice standards.

Recommendations

1. The legal and governance implications of the service model should be considered during the design and implementation phase with advice from relevant experts.
2. The roles and responsibilities of all staff and agencies involved in the service model should be clearly defined.

Capacity

All groups highlighted the potential capacity and resource implications arising from the implementation of the proposed service model, especially in respect of training and competency assessment for domiciliary care workers.

Recommendation
• The business plan should take account of the additional capacity required to implement the service model.

Evaluation

Overall, there was a recognition that the development of any new service should be evaluated to ensure that it is achieving the intended outcomes. This should be done following a suitable length of time after roll-out.

Recommendation
• A post-project evaluation should be undertaken following implementation of the new service.
Summary of Recommendations of the Work of the Subgroups and Outstanding Issues raised by the Regional Steering Group

**Patient Care Pathway subgroup:**
1. A range of solutions tailored to individual patients’ needs should be agreed. It is hoped that the availability of a wider range than exists currently will reduce the number of patients receiving MDS. (Another subgroup was set up to agree solutions).
2. Ideally the assessor should be independent of the community pharmacist providing the solution.
3. Ongoing monitoring and support should be provided by the community pharmacist.

**Assessment tool and referrals subgroup:**
4. Referrals for specialist medicines adherence assessment should be linked if possible to the existing NISAT process.
5. Referrals for specialist medicines adherence assessment should be accepted from all healthcare professionals and social care staff.
6. A clearly defined point of referral should accept referrals and liaise with assessors to facilitate appointments.
7. The specialist medication adherence assessment should be undertaken by a medicines expert such as a pharmacist, pharmacist prescriber (who could also undertake medication review), specialist pharmacy technician or medicines management nurse.
8. The assessor should ideally be independent of the provider of solutions.
9. The patient’s carer/family member should be invited to attend the specialist medicines adherence assessment appointment.
10. The assessment needs to be carried out in a timely manner according to a patient’s circumstances.
11. All patients should be reviewed after an agreed time and if circumstances change to ensure continued adherence.

12. The specialist medicines adherence assessment tool should be piloted at an early stage to ensure that it is fit for purpose.

13. The assessor should have access to relevant NISAT assessment information to facilitate seamless care and improve patient adherence to prescribed medicines.

14. Guidance for assessors and healthcare professionals on the assessment process and tool should be developed.

**Training and competency assessment subgroup:**

15. The capacity of Trusts to implement training and ensure service delivery should be assessed.

16. HSCB in partnership with HSC Trusts should develop regional training specifications (based on DHSSPS standards) for domiciliary care staff who assist with or administer medicines in a domiciliary care setting.

17. Trusts should share information and copies of training resources documentation, policies and guidelines.

18. Trusts should work together to develop regional training and competency assessment tools to include use of MAR charts and MDS.

**Solutions sub-group:**

19. A range of solutions (formerly not available within a commissioned service) should be available from community pharmacy to provide more tailored solutions to individuals.

20. The feasibility of production of a uniform design of MAR charts and medicines reminder cards needs to be further explored and these should be piloted and risk assessed.

21. MAR charts need to accommodate acute medication as well as chronic e.g. an additional MAR chart could be provided to cover an acute such as an antibiotic.
22. Pending agreement by Community Pharmacy Northern Ireland (CPNI), a patient questionnaire could be used to collect information on numbers of patients who currently receive support with medicines-taking from family and paid carers.

23. The quantities of medicines prescribed should facilitate the production of a monthly MAR chart.

**Further Recommendations (Outstanding Issues):**

24. Further work should be undertaken to look at the most appropriate methods of addressing intentional non-adherence, particularly in patients with mental illness.

25. Further work should be undertaken to explore the capacity of Trust pharmacy departments to produce MAR charts and MDS.

26. The needs of intermediate care clients/patients should be considered within the hospital and community pathways.

27. The legal and governance implications of the service model should be considered during the design and implementation phase with advice from relevant experts.

28. The roles and responsibilities of all staff and agencies involved in the service model should be clearly defined.

29. The business plan should take account of the additional capacity required to implement the service model.

30. A post-project evaluation should be undertaken following implementation of the new service.
Conclusion

The project benefited from enthusiastic engagement from the Steering group members and the stakeholders who contributed to the subgroup work. Consensus was reached on the need for a regional solution and the structure of the service.

A business case should now be developed to secure the funding and resources necessary to take forward the service development for the proposed adherence service model. Where possible, in tandem with the business case, the specific recommendations should be progressed in preparation for full implementation of the medicines adherence service to achieve the project aim of “improving outcomes from prescribed medicines by ensuring safety and quality in provision of adherence support for mental health patients and older persons who are living in their own homes”.
Membership of Regional Steering Group and Subgroups

Membership of Regional Steering Group

Chair: Joe Brogan, Asst Director Integrated Care, Head of Pharmacy and Medicines Mgt, HSCB
Deirdre Quinn, Pharmaceutical Services Lead, HSCB
Vera McKendrick, Northern Area Manager, Domestic Care NI
Ramsey Young, Market Development Manager, Lundbeck and ABPI
Christine Kelly, Pharmacy Services Advisor, HSCB
Lorna Conn, Domiciliary Care Inspector, RQIA
Frances Gault, Senior Pharmacy Inspector, RQIA
Dr Arnie McDowell, GP, NIGPC
Aileen Crossin, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Brendan Gormley, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Janice Colligan, Operations Manager, Older People’s Services, SET
Alistair Fitzsimmons, Operations Manager, Mears Care (NI) Ltd
Maureen Hetherington, Deputy Head of Pharmacy & Medicines Mgt, NHSCT
Susan Patterson, Pharmacy & Medicines Management Adviser, HSCB
Claudine McComiskey, Head of Service for Domiciliary Care, SHSCT
Brendan Whittle, Asst Director Older People’s Services, SHSCT
Elizabeth Smyth, Medicines Management Specialist Nurse, SHSCT
Paul Darragh, Consultant in Public Health, Public Health Agency
Anne Keenan, Principal Pharmacist, WHSCT
Lynn Campbell, Information and Development Officer, Carers NI
Eleanor Ross, Nurse Consultant, Public Health Agency
Erika Hughes, Patient Safety Pharmacist, SET
Martin McGready, Head of Homecare, WHSCT
Sandra Ewing, Head of Domiciliary Care, NHSCT
Alison Campbell, Clinical Pharmacy Lead, SEHSCCT
Rhona Fair, Deputy Head of Pharmacy & Pharmacy Services Manager, Royal & Mater Hospitals, Belfast HSC Trust
Geralyn Ainsworth, Assistant Services Manager, BHSCT
Bernadine McCrory, Alzheimer’s Society
Membership of Subgroups

1. Care Pathway Subgroup

Chair: Christine Kelly, Pharmaceutical Services Adviser, HSCB
Dr Arnie McDowell, GP, NIGPC
Veronica Cleland, Residential, Day Care and Domiciliary Services Manager, SE Trust
Dianne Gill, Clinical pharmacy services, NHSCT
Brendan Whittle, Asst Director Older People’s Services, SHSCT
Claudine McComiskey, Head of Service for Domiciliary Care, SHSCT
Elizabeth Smyth, Medicines Management Specialist Nurse, SHSCT
Brendan Gormley, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Eleanor Ross, Nurse Consultant, Public Health Agency
Elaine Calvert, NHSCT
Martin McGready, Head of Homecare, WHSCT
Susan Patterson, Pharmacy & Medicines Management Adviser, HSCB
Deirdre Quinn, Pharmaceutical Services Lead, HSCB
Maureen Hetherington, Deputy Head of Pharmacy & Medicines Mgt, NHSCT

2. Assessment Tool Subgroup

Chair: Susan Patterson, Pharmacy and Medicines Management Adviser, HSCB
Alison Campbell, Clinical pharmacy services, SE Trust
Janice Colligan, Operations Manager, Older People’s Services, SE Trust
Aileen Crossin, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Rhona Fair, Deputy Head of Pharmacy & Pharmacy Services Manager, Royal & Mater Hospitals, Belfast HSC Trust
Eileen Kennedy, Social Care Commissioner, HSCB
Claudine McComiskey, Head of Service for Domiciliary Care, SHSCT
Deirdre Quinn, Pharmaceutical Services Lead, HSCB
Elizabeth Smyth, Medicines Management Specialist Nurse, SHSCT
Brendan Whittle, Asst Director Older People’s Services, SHSCT

3. Training & Competency Assessment Subgroup

Chair: Deirdre Quinn, Pharmaceutical Services Lead, HSCB
Sandra Ewing represented by Paul Bassett, Area Manager for Domiciliary Services, NHSCT
Alistair Fitzsimmons, Operations Manager, Mears Care (NI) Ltd
Diane Gracey, Regional Trainer, Mears Care
Martin Adams, Domiciliary Care Manager, BHSCT
Nuala Kelly, Provider Unit Manager, BHSCT
Geralyn Ainsworth, Assistant Services Manager, BHSCT
Veronica Cleland, Manager Care Provision, SET
Martin McGready, Head of Homecare, WHSCT
Elizabeth Smyth, Medicines Management Nurse, SHSCT
Vera McKendrick, Area Manager, Domestic Care
Janice Colligan, Operations Manager, Older People’s Services, SE Trust
Susan Patterson, Pharmacy & Medicines Management Adviser, HSCB
Maureen Hetherington, Pharmacy Services, NHSCT
Catriona Hegarty, Homecare, WHSCT
Claudine McComiskey, Head of Service for Domiciliary Care, SHSCT
Lynn Campbell, Information and Development Officer, Carers NI

4. Community Pharmacy Solutions Subgroup

Chair: Deirdre Quinn, Pharmaceutical Services Lead, HSCB
Christine Kelly, Pharmaceutical Services Adviser, HSCB
Susan Patterson, Pharmacy & Medicines Management Adviser, HSCB
Aileen Crossin, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Brendan Gormley, Pharmacist Contractor, Community Pharmacists NI (formerly Pharmaceutical Contractors Committee) Representative
Appendix 2

Providing a Medicines Adherence Service in NI: Work of the subgroups and recommendations

1. Patient Care Pathway subgroup

At a meeting of the regional steering group on 15th April 2011 it was decided to develop a patient care pathway from assessment to provision and review. At the next meeting of the regional group on 13th May 2011 a proposed patient pathway was presented for discussion. This led to the setting up of a sub-group. The group has met twice.

Meeting 1

The patient care pathway was broken down into three stages: stage 1 – identify need for assessment; stage 2 – detailed assessment and stage 3 – solutions.

Stage 1 – A range of sources (e.g. family member, carer) can identify a patient who requires a detailed assessment and can refer them via a GP, pharmacist or social care professional. Clients being assessed through care management processes in Trusts can be referred to assess their need for support for medicines taking.

Stage 2 – The assessment was the remit of another sub-group.

Stage 3 – The solutions can range from simple (e.g. larger bottles, wing top bottles) to more complex, e.g. provision of a MDS by a pharmacist and input by domiciliary care workers to assist with medicines-taking. This has training implications.

It was acknowledged that more complex needs would require a solution tailored to those needs, e.g. two elderly people living together and both requiring assistance with medicines-taking.
Meeting 2

Three draft care pathways were discussed:

Pathway 1: Hospital patient.

Pathway 2: Patients at home not in receipt of domiciliary care services.

Pathway 3: Patients at home in receipt of domiciliary care services.

Other areas discussed included solutions and the possibility of producing a medicines administration record (MAR) chart within community pharmacy as an alternative solution to an MDS. There are issues regarding the accuracy of information on the MAR chart at time of production and the impact of an acute prescription being dispensed at a different pharmacy. The possibility of registering those patients who require pharmacy adherence support plus medicines-taking support from domiciliary care workers with a particular pharmacy was discussed but not agreed. It is hoped that a “Medicines Management Care Package” with appropriate solutions could be provided by community pharmacists as part of a funded commissioned service.

It was agreed that the assessment should be objective, valid and final and provide the most suitable solution. For hospital patients, the assessment should be carried out on admission. Questions should be included in the assessment tool to distinguish between complex and non-complex regimes.

For assessments undertaken following referral from care management, the assessor would advise the client’s care manager of the medicines adherence care plan to enable their needs to be met as part of their wider care package.
Recommendations of the Patient Care Pathway subgroup

1. A range of solutions tailored to individual patients’ needs should be agreed. It is hoped that the availability of a wider range than exists currently will reduce the number of patients receiving MDS. (Another subgroup was set up to agree solutions).
2. Ideally the assessor should be independent of the community pharmacist providing the solution.
3. Ongoing monitoring and support should be provided by the community pharmacist.

2. Assessment Tool and Referrals Subgroup

The assessment tool subgroup has met on three occasions. The remit of this sub-group was to design the content of the tool and decide who should administer it.

Meeting 1
The Northern Ireland Single Assessment tool (NISAT), and the interface with a specialist medication adherence assessment was considered by the group. NISAT core assessment, domain 4 (Medicines Management) was deemed particularly relevant. NISAT is being implemented regionally across the five Health and Social Care Trusts in NI, initially in programmes of care for Older People and Older People with Mental Health needs. It is envisaged that NISAT will, in the future, be rolled out across other adult programmes of care as appropriate.

Referrals for medicines assessment from healthcare professionals could be prompted by trigger questions such as those in the NISAT core assessment, domain 4. The group thought that medication adherence assessment should be linked if possible to the existing NISAT process.
It would be desirable for the assessment tool to be administered independently of the provider of the recommended solutions, usually the patient’s regular community pharmacist. It was noted that Trusts are unlikely to have the capacity to administer the medication adherence assessment tool at present. The personnel and location for administration of the tool need to be identified and form an integral part of the care pathway.

The group considered a draft list of contents of a medication adherence assessment tool and a number of published tools from Devon (Devon County Council 2005), Sheffield (Sheffield Teaching Hospitals NHS Foundation Trust) and Lambeth (London Older Peoples Service Development programme 2003). Following initial discussions it was decided to base the NI tool on the Devon medication adherence assessment tool and recent relevant research evidence.

**Meeting 2**

It was agreed that referrals from healthcare professionals and social care staff not currently using the NISAT assessment should be facilitated by providing a form similar to the NISAT contact screening form to all healthcare professionals and social care staff. A central point of referral would be preferable. The trigger questions should be made available to all health and social care staff and responses could be passed to the patient’s key worker or care manager to make a referral if appropriate.

The group continued with discussions on the content of the assessment tool with reference to the Devon tool, Sheffield tool, Lambeth “Practical Solutions” document and NISAT core, domain 4.

The DRUGS tool (Edelberg 1999) which assesses patients by observing their performance of medicines tasks was briefly discussed. Use of an observational tool versus responses to questions which may not reflect the
patient’s true ability was compared. If assessment is performed only through questioning the patient, the assessor may require independent comment from a carer or relative to verify the patient’s responses.

The specialist medication adherence assessment should be undertaken by a medicines expert such as a pharmacist, pharmacist prescriber (who could also undertake medication review), specialist pharmacy technician or medicines management nurse.

The assessment could take place in a number of locations. The options suggested were:
- Patients own home
- Clinic e.g. community clinic or GP practice
- Hospital, preferably early after admission e.g. at the time of medicines reconciliation

Meeting 3
The group continued with discussions on the content of the draft assessment tool. A practical section (DRUGS tool) was included. The assessor may require independent comment from a carer or relative to verify the patient’s responses, especially if the patient is cognitively impaired or their non-adherence is intentional. The group thought that the patient’s carer/family member should be invited to attend the assessment appointment and that this need should be identified in advance of the assessment.

Self assessment was briefly discussed but not thought to be appropriate for patients receiving a detailed medication adherence assessment following a referral.
It was noted that there may be a large group of patients potentially requiring support with medicines adherence amongst people who have their medicines delivered but are not in need of domiciliary care. Community pharmacists may be able to identify this group and refer them for assessment.

The complexity of a medication regimen should be defined to ensure that patients receive the appropriate level of adherence support. It would be useful to develop guidance e.g. a list of criteria and a decision tree for healthcare professionals to use in conjunction with the referral and assessment process.

Consideration was also given to the time taken from patient referral until their assessment. The service should be timely depending upon individual patient’s circumstances and avoid unnecessary delay in undertaking assessments.

The community pharmacist providing the solution will have an important role in monitoring adherence and highlighting concerns following the assessment. There should also be a facility within the service to enable referral for further review if a solution no longer meets an individual patient’s needs.

A draft assessment tool was developed but the group recognised that this would require extensive piloting to ensure that the design will be fit for purpose in the range of healthcare settings in which it could potentially be administered.

**Recommendations of the assessment tool subgroup:**

1. Referrals for specialist medicines adherence assessment should be linked if possible to the existing NISAT process.
2. Referrals for specialist medicines adherence assessment should be accepted from all healthcare professionals and social care staff.
3. A central point of referral should accept referrals and liaise with assessors to facilitate appointments.
4. The specialist medication adherence assessment should be undertaken by a medicines expert such as a pharmacist, pharmacist prescriber (who could also undertake medication review), specialist pharmacy technician or medicines management nurse.
5. The assessor should ideally be independent of the provider of solutions.
6. The patient’s carer/family member should be invited to attend the specialist medicines adherence assessment appointment.
7. The assessment needs to be carried out in a timely manner according to a patient’s circumstances.
8. All patients should be reviewed after an agreed time and if circumstances change to ensure continued adherence.
9. The specialist medicines adherence assessment tool should be piloted at an early stage to ensure that it is fit for purpose.
10. The assessor should have access to relevant NISAT assessment information to facilitate seamless care and improve patient adherence to prescribed medicines.
11. Guidance for assessors and healthcare professionals on the assessment process and tool should be developed.

3. **Training & Competency Assessment Subgroup**

The training and competency assessment subgroup met on three occasions. Steering group members and other interested staff from Trusts, domiciliary care agencies and voluntary organisations attended. The agenda focused on the training implications for Trust and domiciliary care agency staff that may be required to assist people to adhere to prescribed
medication or to administer medication. This provided a great opportunity for sharing of practice across the Trusts including policies and training materials.

Meeting 1
Information about domiciliary care training providers from other UK regions was sought. Group members looked for any other information on training already provided or meeting RQIA guidance. Research carried out locally on domiciliary care workers experience of changes in their role was shared. All members shared any examples of practice in respect of training, competence assessment or service delivery in supporting domiciliary care workers in medicines administration in England, Scotland and Wales e.g. Neath and Port Talbot project involving MAR charts. Members looked at the tele-health project using automated systems to support medicines. Group members were invited to attend staff training in the Southern HSC Trust area (June 2011) to observe. Feedback on the adherence project and the training sub-group was given to the Regional Domiciliary Care Managers’ meeting.

The role of training for carers/family members in assisting patients/clients with their medication was considered. In addition, assessment of family member/carer's needs and their competence to support patients was thought may be necessary. The role of the voluntary sector should also be considered and feedback should be obtained from domiciliary care workers to guide training development.

Meeting 2

The group acknowledged that MDS were not the most appropriate solution to resolve medicines adherence problems for all patients but that reminder cards or MAR charts may be useful for all patients irrespective of whether an MDS was required. This would have implications for all core domiciliary care staff training currently offered by Trusts and agencies as training on
the use of MAR charts is not currently given to domiciliary care workers. If medicines are to be administered from original packaging, consideration should be given to the complexity of the medication regimen as part of the assessment. It was agreed that representatives from all five Trusts should meet to agree a way forward.

Meeting 3

Group representatives from all 5 Trusts agreed that it would be important to meet with HSCB advisers to work on developing regional training specifications (based on DHSSPS standards and RQIA Guidance), collate training materials and produce regional harmonised materials.

Issues raised across all meetings included:

- **Domiciliary Care Service provision and medicines assistance or administration**
  Trusts vary considerably in the extent of in-house or agency domiciliary care service provision. There is also a variable level of support provided by HSC Trusts for training in medicines administration for domiciliary care workers, both Trust employees and employees of independent agencies.

- **Governance**
  There was a consensus on governance issues for domiciliary care staff administering medicines, especially from separate containers rather than from MDS boxes. Concerns were expressed about the risks involved in ensuring adequate training for Band 2 care staff, the risks in medicines administration, the need for an audit trail and the ability to identify administration errors. Staff expressed concerns that the medicines adherence support service may shift the risks from the pharmaceutical risks of errors in the filling and supply of MDS including chemical stability of medicines removed from their original containers etc. to a risk of errors in administration of medicines by care staff using MAR charts.
• **Trust capacity**
  Representatives expressed concerns about their capacity to undertake any additional training and competency assessment for domiciliary care workers.

• **Hospital discharge**
  Problems can present when patients in receipt of domiciliary care are discharged with individual containers and domiciliary care staff have to administer medicines if no medication record sheet is provided from the hospital to guide administration times.

**Recommendations of the training and competency assessment subgroup**

1. The capacity of Trusts to implement training and ensure service delivery should be assessed.

2. HSCB in partnership with HSCT Trusts should develop regional training specifications (based on DHSSPS standards) for domiciliary care staff that assist with or administer medicines in a domiciliary care setting.

3. Trusts should share information and copies of training resources documentation, policies and guidelines.

4. Trusts should work together to develop regional training and competency assessment tools to include use of MAR charts and MDS.

4. **Solutions (community pharmacy) sub-group**
A small sub-group of community pharmacists and HSCB pharmacists was convened to agree which adherence solutions were feasible for community pharmacists to produce. The group met three times.

Meeting 1

Two members of the group had recently met with a local community pharmacy software supplier to discuss the implications for community pharmacies who wished to offer MAR charts as an adherence solution. Both A4 and A5 sheets are available with the sheets displaying either seven day or twenty-eight day intervals for a range of dosage times.

A range of solutions was discussed including:

1. Larger print on labels
2. Larger font on reminder sheets
3. Reminder cards with list of medicines and dosing schedule, possibly larger font if necessary
4. Reminder telephone calls (to link in with voluntary sector schemes) and/or SMS messages
5. Wing-tops/ordinary caps on bottles
6. Larger bottles
7. Aids for opening bottles, de-blistering, instilling eye drops (could be purchased)
8. Container solutions e.g. multi-compartment compliance aid boxes purchased by families
9. Family trained by pharmacist to fill multi-compartment compliance aid box (not filled by pharmacist)
10. Training of family/carer to administer medicines
11. MAR chart produced monthly (to facilitate clear information on medicine dosing and for recording administration by domiciliary care workers/carers)
12. Monitored Dosage Systems (MDS)
MAR charts were also discussed. A service involving a MAR chart would require clarity around:

- Requirement for registration of patients with a particular pharmacy to provide a medicines management service including the MAR chart
- Roles and responsibilities for ordering medication for patient
- Inclusion of medicines in MAR chart where supply wasn’t required
- Ensuring the accuracy of MAR chart by communication with GP when necessary
- Suitable quantities of medicines prescribed to minimise changes to MAR charts mid cycle, should ideally be twenty-eight days
- Indemnity insurance

Meeting 2
The range of solutions was reviewed. Incorporation of the agreed range into the assessment tool table of problems and solutions was discussed.

In order to develop the business case for patients who require support, it is necessary to establish how many patients this will involve. Trusts cannot provide this information. It was agreed that a questionnaire be developed which might be used by community pharmacists to ascertain how many patients required MDS provision and whether the MDS is used by patients themselves or with support.

Meeting 3
Discussions focused on the production of MAR charts by community pharmacists and the content of the patient questionnaire was agreed. The Royal Pharmaceutical Society G.B. guidance on the safe and appropriate production of MAR charts (2009) was broadly agreed with
the exception of principle 2 “the MAR chart should include all prescribed externally applied medicines”. The pharmacists were concerned about including items on a MAR chart that they were not dispensing at the time of production because a patient may still have sufficient supply or these were being dispensed from another source, e.g. specialist medicines supplied by a HSC Trust. This was identified as a problem because there is no single person/organisation responsible for communicating a patient’s up to date complete medication record to a pharmacist who would have responsibility for creating a MAR chart.

There was discussion around pharmacists’ indemnity and further clarity was to be sought. It was recommended that a “footer” be added to the MAR chart stating that on receipt by the patient it was now the responsibility of the patient or Trust.

The group was not convinced that registration of patients requiring support with a particular pharmacy would be of benefit.

**Recommendations of the Solutions Sub-group**

1. A range of solutions (formerly not available within a commissioned service) should be available from community pharmacy to provide more tailored solutions to individuals.
2. The feasibility of production of a uniform design of MAR charts and medicines reminder cards needs to be further explored and these should be piloted and risk assessed.
3. MAR charts need to accommodate acute medication as well as chronic e.g. an additional MAR chart could be provided to cover an acute such as an antibiotic.
4. Pending agreement by Community Pharmacy Northern Ireland (CPNI), a patient questionnaire could be used to collect
information on numbers of patients who currently receive support with medicines-taking from family and paid carers.

5. The quantities of medicines prescribed should facilitate the production of a monthly MAR chart.
Appendix 3

Regulations, Minimum standards and Guidelines on Medicines Management in Domiciliary Care

1. Health and Personal Social Services. The Domiciliary Care Agencies Regulations (Northern Ireland) 2007 No. 235
   

   

   
References


NICE Costing Statement: Medicines Adherence: involving patients in decisions about prescribed medicines and supporting adherence. 2009


# Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tr>
<td><strong>Acute prescription</strong></td>
<td>One that the patient usually receives on a 'one-off' basis for conditions that are often short-lived e.g. infection, pain after an operation.</td>
</tr>
<tr>
<td><strong>Adherence</strong></td>
<td>The extent to which a person’s behaviour coincides with medical or health advice.</td>
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<tr>
<td><strong>Appropriate medication</strong></td>
<td>The right person receives the right medicine in the right dose in the right formulation at the right time.</td>
</tr>
<tr>
<td><strong>Assessment</strong></td>
<td>A person-centred process whereby the needs of an individual are identified and their impact on daily living and quality of life is evaluated, undertaken with the individual, his/her carer and relevant professionals.</td>
</tr>
<tr>
<td><strong>Audit</strong></td>
<td>Systematic review of the procedures that examines how associated resources are used and investigates the effect that care has on the outcome and quality of life for the patient.</td>
</tr>
<tr>
<td><strong>Care plan</strong></td>
<td>The outcome of an assessment. A description of what an individual needs and how these needs will be met.</td>
</tr>
<tr>
<td><strong>Care worker</strong></td>
<td>A person who is paid to deliver care to an individual.</td>
</tr>
<tr>
<td><strong>Carer</strong></td>
<td>A person, without payment, provides help and support to a family member or friend who may not be able to manage at home without this help because of frailty, illness or disability. It excludes paid care workers and volunteers from voluntary organisations.</td>
</tr>
<tr>
<td><strong>Main carer</strong></td>
<td>The individual who, without payment, takes primary responsibility for providing help and support to a person who may not be able to manage at home without this help because of frailty, illness or disability.</td>
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<tr>
<td><strong>Case records</strong></td>
<td>Records or documents containing information which has been created or maintained as evidence of patient / client</td>
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<tr>
<td>Term</td>
<td>Definition</td>
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<tr>
<td>care given, and care/ treatment planned.</td>
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<tr>
<td>Commissioning</td>
<td>The process of meeting needs at the strategic level for whole groups of service users and/or whole populations and of developing policy directions, service models and the market to meet those needs in the most appropriate and cost effective way.</td>
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<tr>
<td>Community and voluntary sector</td>
<td>Community and voluntary organisations and social economy enterprises.</td>
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<tr>
<td>DHSSPS</td>
<td>Department of Health, Social Services and Public Safety.</td>
</tr>
<tr>
<td>Domiciliary / home care services</td>
<td>The range of services put in place to support a person in their own home.</td>
</tr>
<tr>
<td>Equality Act 2010</td>
<td>Aims to protect disabled people and prevent disability discrimination. It provides legal rights for disabled people in areas including access to goods, services and facilities.</td>
</tr>
<tr>
<td>Evidence-based (care / practices)</td>
<td>An approach to decision making where staff use the best evidence available, in consultation with service users, their representatives and relevant health care professionals to decide upon the option which suits each patient best.</td>
</tr>
<tr>
<td>Governance</td>
<td>The act of governing; exercising authority</td>
</tr>
<tr>
<td>HSCB (Health &amp; Social Care Board)</td>
<td>Commissions a range of services that deliver high quality and safe outcomes for users, good value for the taxpayer and compliance with statutory obligations. A key role is effective engagement with providers, Patient Client Council (PCC), local government, service users, local communities, other public sector bodies, and the voluntary and community sectors.</td>
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<tr>
<td>Hospital discharge</td>
<td>The process of leaving hospital after admission as an in-patient.</td>
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<tr>
<td>Independent sector providers</td>
<td>The umbrella term for all non-statutory organisations delivering public care including a wide range of private companies.</td>
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<tr>
<td>Intentional non-</td>
<td>May be due to non-belief in drug therapy i.e. the patient believes the drug is not needed, is ineffective or that too</td>
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<tr>
<td><strong>adherence</strong></td>
<td>many drugs are being taken.</td>
</tr>
<tr>
<td><strong>Intermediate care</strong></td>
<td>A short period (normally no longer than six weeks) of intensive rehabilitation and treatment to enable people to return home following hospitalisation; or to prevent admission to a long term residential care or nursing home; or intensive care at home to prevent unnecessary hospital admission.</td>
</tr>
<tr>
<td><strong>Key worker</strong></td>
<td>An identified individual with responsibility for planning and coordinating patient care across interfaces, promoting continuity of care and ensuring that the patient and health and social care staff know how to access information and advice. The key worker can be the individual's General Practitioner, Community Nurse, Specialist Nurse, Social Worker, AHP or any other person identified by the multidisciplinary team.</td>
</tr>
<tr>
<td><strong>Long term conditions</strong></td>
<td>Illnesses, which last longer than a year, usually degenerative, which are causing limitations to one’s physical, mental and/or social wellbeing. Long-term conditions include diabetes, COPD, asthma, arthritis, epilepsy and mental health problems. Multiple long-term conditions make care particularly complex.</td>
</tr>
<tr>
<td><strong>Managing your medicines service</strong></td>
<td>Service provided by community pharmacists in NI to assist people with adherence to medicines who are: living alone, have evidence of poor medication adherence or whose medication has recently changed and who are taking four or more medicines or who have a chronic medical condition requiring regular review.</td>
</tr>
<tr>
<td><strong>Medicines Administration Record chart (MAR)</strong></td>
<td>Record of all medicines taken or administered which facilitates good medicines management and evidence of medicines support or administration. The health care professional signs off on the record at the time that the drug or device is administered. Can form part of a patient's permanent record in their medical chart.</td>
</tr>
<tr>
<td><strong>Monitored dosage systems (MDS)</strong></td>
<td>Medications are packed into blister/bubble trays, under the supervision of a pharmacist and then cold or heat sealed with foil. Examples of these systems are the Nomad® and Manrex®. Patients using an MDS are provided with weekly</td>
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<tr>
<td>Term</td>
<td>Description</td>
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<tr>
<td>Medicines reconciliation</td>
<td>The process of identifying the most accurate list of all medicines a person is taking, including name, dose, frequency and routes.</td>
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<tr>
<td>Medicines review</td>
<td>Checking the impact of medicines to maximise a person’s health and giving the person an opportunity to raise questions and highlight problems about their medicines.</td>
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<tr>
<td>Monitoring</td>
<td>Ongoing oversight of people’s needs and circumstances to ensure the quality and continued appropriateness of support and services to meet the agreed outcomes for the individual and, where appropriate, his/her carer(s). The person receiving the services, his/her authorised representative and carer(s), where appropriate, and service providers all have a part to play in formal and informal monitoring.</td>
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<tr>
<td>Multi-compartment compliance aid (MCA)</td>
<td>Also known as dose administration aid:</td>
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<tr>
<td></td>
<td>These are plastic trays or boxes that hold seven days of a patient’s medicine and are divided into days of the week. Each day of the week has a sliding lid, which covers compartments for different dosing times (usually four compartments for each day). They are commonly but not exclusively used for multiple medications. Examples of these are Dosette® and Medidose®.</td>
</tr>
<tr>
<td>Multifaceted interventions</td>
<td>Interventions having many different aspects or features (medical, psychological, social and environmental factors) based on research evidence.</td>
</tr>
<tr>
<td>Multiple dispensing</td>
<td>The supply, by a pharmacist, of part of the total quantity of a prescription-only-medicine, at set intervals (e.g. weekly or daily) as requested in writing by the GP or other authorised prescriber. Multiple Dispensing is an “exception” facility for use where the prescriber considers that it is essential to protect the well-being of the patient (to prevent abuse, misuse or life-threatening non-compliance) that instalments of the drug prescribed should be supplied to the patient at stated intervals.</td>
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<tr>
<td>NISAT: Northern Ireland Single Assessment Tool</td>
<td>Assessment tool which has been designed to capture the information required for holistic, person-centred assessment of the health and social care needs of the older person. It reduces duplication and promotes multi-disciplinary working. Its focus is on the person’s abilities and strengths rather than their disabilities. It standardises and streamlines assessment and care planning processes, thereby simplifying access to community care services.</td>
</tr>
<tr>
<td>Non-intentional non-adherence</td>
<td>Can be due to physical problems such as difficulty in taking medicines e.g. opening bottles, swallowing etc. or cognitive problems such as memory impairment or poor organisational skills.</td>
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<tr>
<td>Northern Ireland Drug Tariff</td>
<td>Outlines the payments made to pharmacy and appliance contractors for NHS services as reimbursement (the cost of the drugs, appliances etc which have been supplied against an NHS prescription form) and remuneration (the payment of fees and allowances as part of the dispensing contract with the local health Board); the rules to follow when dispensing; the value of the fees and allowances paid; the prices of certain drugs and appliances which will be reimbursed.</td>
</tr>
<tr>
<td>Outcome</td>
<td>The impact, result or effect of services on the community or the end result of the care provided to a patient.</td>
</tr>
<tr>
<td>Re-ablement</td>
<td>Timely and focused intensive support to maximise long term independence and minimise the need for ongoing support by enabling the older person to learn or re-learn skills which are important to them for daily living.</td>
</tr>
<tr>
<td>Repeat prescription</td>
<td>A repeat prescription is one that the patient can receive without consulting the doctor every time they need a supply.</td>
</tr>
<tr>
<td>RQIA: Regulation and Quality Improvement Authority</td>
<td>Independent health and social care regulator in Northern Ireland. Encourages continuous improvement in the quality of health and social care services through a programme of inspections and reviews.</td>
</tr>
<tr>
<td>Review</td>
<td>A planned procedure to determine whether or not the services provided continue to meet the needs of the individual.</td>
</tr>
<tr>
<td><strong>Screening tool</strong></td>
<td>An aid to assess patients’ health status e.g. nutritional screening tool is an aid to assess the nutritional status of patients.</td>
</tr>
<tr>
<td><strong>Service user</strong></td>
<td>A person who is receiving or is eligible to receive health and social care services. They may be individuals staying in their own homes, living in residential care or nursing homes, or being cared for in hospital.</td>
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</tbody>
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