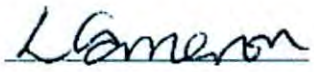
NHS Grampian

Management of Omitted or Delayed Medicines Guideline

This guideline aims to reduce the incidence of omitted and delayed doses and details the actions which should be taken when a dose of medicine is omitted or delayed

Lead Author	Reviewer:	Approver:
Medication Safety Advisor	Acute and Mental Health Medicines Safety Group	Medicines Guidelines and Polices Group

Signature:		Signature:
		

Identifier:	Review Date:	Date Approved:
NHSG/Guid/OD_Meds/ MGPG1368	May 2025	May 2023

Uncontrolled when printed

Version 2

Executive Sign-Off

This document has been endorsed by the Director of Pharmacy and Medicines Management

Signature: 

Title: Management of Omitted or Delayed Medicines Guideline

Unique Identifier: NHSG/Guid/OD_Meds/MGPG1368

Replaces: Management of Omitted or Delayed Medicines Policy, Version 1, Unique Identifier: NHSG/MSG/OMR/001

Across NHS Boards	Organisation Wide	Directorate	Clinical Service	Sub Department Area

Lead Author/Co-ordinator: Medication Safety Advisor

Subject (as per document registration categories): Guideline

Key word(s): Guideline medicine, omitted dose, missed dose, delayed dose, critical medicine

Process Document: Policy, Protocol, Procedure or Guideline Guideline

Document application: NHS Grampian

Purpose/description: This guideline aims to reduce the incidence of omitted and delayed doses and details the actions which should be taken when a dose of medicine is omitted or delayed.

Responsibilities for implementation:

Organisational: Chief Executive and Management Teams
Corporate: Senior Managers
Departmental: Heads of Service/Clinical Leads
Area: Line Managers
Hospital/Interface services: Assistant General Managers and Group Clinical Directors
Operational Management Unit: Unit Operational Managers

Policy statement: It is the responsibility of all staff to ensure that they are working to the most up to date and relevant policies, protocols procedures.

Review: This guideline will be reviewed in three years or sooner if current treatment recommendations change.

Responsibilities for review of this document: Acute and Mental Health Medicines Safety Group

Responsibilities for ensuring registration of this document on the NHS Grampian SharePoint:	Medicines Management Administrator
Physical location of the original of this document:	Pharmacy Department, ARI
Job/group title of those who have control over this document:	Medication Safety Advisor
Responsibilities for disseminating document as per distribution list:	Medication Safety Advisor

Revision History:

Revision Date	Previous Revision Date	Summary of Changes (Descriptive summary of the changes made)	Changes Marked* (Identify page numbers and section heading)
May 2023	N/A	Changed from Policy to Guideline	Throughout document
		Updated and added references	Page 1 Section 1 Introduction Page 9 Section 4 References
		Added to 1st paragraph defining acceptable timing of administration of medicines in relation to prescribed time.	Page 1 Section 1.2 Definitions
		Added sentence re: timing of administration of critical medicines	Page 2 Section 1.2 Definitions
		Added definition of time critical medicines	Page 2 Section 1.2 Definitions
		Added note regarding introduction of Hospital Electronic Prescribing and Medicines Administration (HEPMA)	Page 2 Section 1.3 Clinical Situations
		Updated evidence base	Page 2 Section 2 Evidence Base
		Updated/included: • Responsibilities • Terminology of adverse events • Duty of Candour • Prevention of Omitted Doses Poster • HEPMA • Self-Administration of Medicines • Excellence in Care	Page 4-9 Section 3 Main Components and Recommendations

Revision Date	Previous Revision Date	Summary of Changes (Descriptive summary of the changes made)	Changes Marked* (Identify page numbers and section heading)
		Updated consultation group	Page 10 Section 6 Consultation
		Removed Appendix	Page 12 Appendix 1

* Changes marked should detail the section(s) of the document that have been amended, i.e. page number and section heading.

NHS Grampian

Management Of Omitted Or Delayed Medicines Guideline

Contents Page No:

Management of Omitted or Delayed Medicines Guideline

This guideline aims to reduce the incidence of omitted and delayed doses and details the actions which should be taken when a dose of medicine is omitted or delayed

1. Introduction

This guideline aims to reduce the incidence of omitted and delayed doses and details the actions which should be taken when a dose of medicine is omitted or delayed. Medicine doses may be omitted or delayed for a number of reasons, some of which may be intended, appropriate and done for the benefit of the patient. Others, however, may be as a result of errors during prescribing, dispensing, supply or administration of medicines. There will be times where a patient's medicine is critical to their condition and any delay may cause harm or death and therefore it would not be appropriate to omit this medicine. For example; all medicines required in a medical emergency must be administered without delay.

Omitted and delayed medicines are one of the most frequent causes of medicine incidents reported to the National Patient Safety Agency (Cousins et al, 2012) [(1)].

The Scottish Patient Safety Programme: Medicines Collaborative [(2)] has named Omitted Medicines one of the priority areas for NHS Boards across Scotland to undertake quality improvement work.

The NHS Grampian Acute and Mental Health Medicines Safety Group has also named omissions and delays as a priority for NHS Grampian and in May 2022 NHS Grampian pledged to support the Parkinson's UK "Get It On Time" campaign which aims to ensure all patients admitted to hospital receive their time critical medicines on time.

As omitted doses are sometimes due to inaccurate medicine reconciliation on admission, transfer and discharge, this guideline should be used in conjunction with the NHS Grampian Medicine Reconciliation Protocol [(3)] to further help reduce the risk of prescribing omissions.

1.1 Objectives

- To reduce the incidence of inappropriate omitted or delayed doses.
- To ensure that the correct annotations to the Prescription and Administration Record (PAR), Hospital Electronic Prescribing and Medicines Administration (HEPMA) or equivalent prescription records and any special prescriptions, e.g. fluids, warfarin, insulin are made when a dose is omitted or delayed and that there are no unrecorded omitted or delayed doses 'blank boxes'.
- To detail the actions required when a dose of medicine is omitted or delayed.

1.2 Definitions

The Instructions For NHS Grampian Staff On The Prescribing And Administration Of Medicines Using The NHS Grampian Prescription And Administration Record [(4)] state that "most medicines can be administered up to one hour before or one hour after the prescribed time". Some medicines will be required to be administered closer than one hour of the prescribed time. Staff administering medicines should use clinical assessment and professional judgement to prioritise care in order to facilitate individual medicines being given within the appropriate timeframe required for them.

Omitted dose: Failure to administer a medicine before the next dose is due, or in the case of urgent or once only medicines, failure to administer. Omitted doses can be intended or unintended, the purpose of this guideline is to focus on unintended omitted doses.

Delayed dose: Any medicine administered more than one hour after the time it was intended.

Blank Box: A box on the administration section of the PAR which has been left bank when a medicine should have been administered, i.e. a box with no signature or non-administration code recorded meaning it is unknown whether a medicine was either administered or omitted for an appropriate reason. In HEPMA it will appear as "planned administration did not occur", refer to Administration Not Recorded (sharepoint.com) [(5)] for further detail.

Critical medicine: A medicine is considered a critical medicine if its omission or delay could have a significant impact on the patient in terms of loss of therapeutic effect and risk of deterioration, e.g. medicines which when omitted or delayed can or could:

1. Be life threatening
2. Severely impact the patient's progress or cause long term harm
3. Greatly increase the patient's length of stay in hospital
4. Cause a reduction in the patient's ability to function
5. Cause the patient significant pain or distress.

Note**:** Medicines which may appear non-critical at first may actually be critical dependent on the patient's symptoms or circumstances. Critical medicines should **not** be omitted and should be administered as close to the prescribed time as possible.

Time critical medicine: Medicines where any delay in administration will have a significant adverse impact on the patient's symptoms. Parkinson's medicines and insulin are examples of time critical medicines. Clinical assessment and professional judgement should be used to prioritise administration of time critical medicines.

All medicines required in a medical emergency would be considered a time critical medicine and as such should be administered without delay.

1.3 Clinical Situations

This guideline applies to all NHS Grampian staff administering medicines to patients in any setting.

As Hospital Electronic Prescribing and Medicines Administration (HEPMA) is introduced across NHS Grampian the principles in this guideline will remain however, specifics on how to record omitted doses will be as per the HEPMA system and relevant associated training.

1.4 Patient Groups to Which This Document Applies

This document applies to all patient groups across NHS Grampian.

1.5 Patient Groups to Which This Document Does Not Apply

N/A

2. Evidence Base

Reducing harm from omitted and delayed doses has been well publicised in the past by the National Patient Safety Agency (NPSA) and in May 2022 the Specialist Pharmacy Service (SPS) (6) announced that the SPS team are working with the Medication Safety Network and the NHS Improvement Patient Safety Team to develop guidance for Medication Safety Officers (MSOs) to promote good practice in reducing harm from omitted and delayed medicines.

The Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry chaired by Robert Francis QC (2013) (7) stated that "a frequent check needs to be done to ensure that all patients have received what they have been prescribed and what they need. This is particularly the case when patients are moved from one ward to another, or they are returned to the ward after treatment".

In response to the Vale of Leven Hospital Enquiry Report (8) the Scottish Government introduced Excellence in Care (EIC) (9); a national set of quality indicators to measure the quality of care within NHS Scotland Health Boards of which Omitted Doses is one. EIC omitted doses data collected by NHS Grampian during 2019-2021 shows that while the percentage of omitted doses is less than 5% the percentage of patients having one or more omitted dose is between 20-40% demonstrating that a significant number of patients will experience a missed dose at some point during their hospital stay.

3. Main Components and Recommendations

3.1. Ownership and Responsibilities

Professional Leadership Teams are responsible for:

- The implementation of this guideline.

Staff who prescribe medicines are responsible for:

- Completing an accurate medicine reconciliation within 24 hours of admission or as soon as practicably possible in areas that do not have 24 hour medical cover, e.g. community hospitals.
- Prescribing all appropriate medicines promptly and accurately.
- Informing appropriate staff when a new medicine is prescribed or a prescription is changed and ensuring they have no queries.
- Reviewing the patient's medicines including omitted or delayed doses on a regular basis, e.g. on ward rounds.
- Ensuring patients are informed and aware of the time critical nature of specific medicines.

Staff who administer medicines are responsible for:

- Administering medicines at the prescribed time unless otherwise directed by a prescriber.
- Ensuring a supply is in stock when new medicines are prescribed.
- Taking steps to reduce the incidence of omitted and delayed doses such as regular reviews of the PAR (or equivalent prescription record).
- Recording omitted or delayed doses as described in the Instructions for NHS Grampian Staff on the In-Patient Prescribing and Administration of Medicines using the NHS Grampian Prescription and Administration Record [4] or Non-Administration Reasons Including Uncharted Dose (sharepoint.com) [10] for HEPMA.
- Referring to the prescriber and/or pharmacy staff for advice on action to be taken with doses omitted or delayed.
- Informing patients when medicines are next due, in particular time critical medicines.

Staff who review medicines are responsible for:

- Checking the accuracy of medicines reconciliation.
- Ensuring medicines are supplied in a timely manner and arranging the supply of critical medicines as a priority.
- Reviewing and where necessary, making changes to systems for supply of critical medicines in and out of hours to minimise risks to patients.
- Review omitted or delayed doses on a regular basis.
- Providing advice on actions required if doses are omitted or delayed.
- Monitoring compliance with protocols at appropriate intervals (ward based staff).

- Reviewing ward stock contents and levels at regular intervals, with input from the multidisciplinary team, to prevent omitted or delayed doses (ward based staff).

Staff involved in prescribing, administering or reviewing of medicines are also responsible for:

- Using professional judgement to assess whether a medicine is considered critical.
- Inspecting the PAR (or equivalent) for any doses which have not been recorded as having been omitted and investigate whether the medicine has been administered or not (i.e. look out for "blank" administration boxes) and react accordingly.
- Initiating the actions to be taken, which are described in table 1, if a dose is omitted or delayed.
- Ensuring the appropriate patient's medicines accompany the patient if transferred or discharged being mindful of discharge/transfer to community settings where medicines stock may not be readily available and delivery timings less frequent.
- Reporting omitted or delayed doses as adverse events via DATIX reporting system.

All Staff:

In respect of an adverse event all staff should follow the NHS Grampian guideline for the Management of Learning from Adverse Events [(11)] and the responsible person must follow professional duty of candour giving an explanation and apology to the patient and/or their family at the time the adverse event was discovered. If the adverse event triggers Organisational Duty of Candour actions must be followed as set out in the NHS Grampian Organisational Duty of Candour Procedure [(12)].

3.2. Actions to be taken when a dose of medicine is omitted or delayed

All staff involved in prescribing, administering or reviewing medicines should follow the table below if a dose is omitted. The urgency of the actions will depend on whether or not the omitted dose is considered a critical medicine. Critical medicines are defined in the Prevention of Omitted Doses Poster [(13)] which also acts as a guide to direct staff on which actions to take if there is a reason for possible omission. The poster is available on Grampian Guidance and can be printed and displayed in clinical areas where medicines are being prepared for administration e.g. in drug preparations rooms or on medicines trolleys.

The table on the following page details actions to be taken as per non-administration reasons/codes in the PAR.

Note: The order of the number codes in the table follows that detailed in the NHS Grampian PAR and may not be the exact order of the number codes detailed in other paper types of administration records used within NHS Grampian, for example, the Medicines Administration Record (MAR), however, the reason and action to be taken are relevant.

Areas using HEPMA, the actions to be taken below remain relevant but staff should refer to Non-Administration Reasons Including Uncharted Dose (sharepoint.com) [(10)]

for instructions on how to chart reasons for non-administration of medicines in HEPMA.

Non-administration Reasons and Action to Be Taken	
Reason	**Action to be Taken**
1. Patient refused	• Assess reason for refusal • Review the need for prescription. • If need for medicine is confirmed and patient continues to refuse, consider whether it is appropriate to use covert administration by referring to the NHS Grampian Staff Guidance on Covert Administration of Medication (Adult Policy) [14].
2. Patient unavailable	• If patient off ward for an investigation, check with prescriber if patient should be given medicine promptly by appropriate staff in that area or when patient returns to ward, particularly if it is considered a critical medicine. • Check with prescriber or pharmacist if the medicine can be given, or if the next dose due to be administered is too close to the current time. • If patient is off the ward of own free will, remind patient of drug round times and ask them to be present at the appropriate times. Consider arranging medicines for on-pass.
3. Medicine out of stock	Attempt to obtain medicine by: • Double checking with a colleague if the medicine is available from ward stock (check all cupboards, CD cupboards, trolleys and fridges). • Identifying whether the patient has brought in a suitable supply of their own medicine. • Order the medicine urgently from pharmacy during normal opening hours. • If it is out of hours borrow from another ward/department. • If out of hours, check emergency drug cupboard if there is one in your area or contact the on call pharmacist via the hospital switchboard who can advise on which wards stock the medicine or arrange supply. • Refer to the prescriber if unable to source medicines after following steps above.
4. Instructions not clear/legal	• Contact a prescriber to rewrite the prescription promptly.
5. Nil by mouth (e.g. being fasted prior to surgery)	• Refer to prescriber or pharmacist for advice – do not assume that the prescriber intends the medicine be withheld. It may be, for instance, that the anaesthetist or surgeon would instruct that the medicine still be given.
6. Once only/as required	• Record in the regular therapy prescription that the dose was omitted with code 6 if the medicine has already been administered as either a ‘once only’ or an ‘as required’ dose.

Non-administration Reasons and Action to Be Taken	
Reason	**Action to be Taken**
7. Dose withheld – Prescribers instructions	• Refer to prescriber to review the patient's medicine regime if the situation is ongoing. • Highlight immediately to the prescriber if the medicine is considered critical.
8. Self-administered by the patient	• Refer to the NHS Grampian Policy for Self-Administration of Medicines (SAM) in Hospital [15] • Supervise self-administration and record what actual doses are taken by the patient. • Review as per local process for self-administration of medicines if self-administration is appropriate for this patient.
9. Nausea/vomiting	• Refer to prescriber to review medicines regime as an alternative route of administration may be possible especially if the medicines is considered critical.
10. Unable to swallow	• If the patient has swallowing difficulties refer for Speech and Language Therapy (SALT) review promptly if patient has not already been seen by SALT and the medicine is considered critical. • Refer to prescriber and/or pharmacist to review medicine regime to look for alternative formulation, route and/or medicines.
11. No IV access	• Refer promptly to prescriber for replacement of IV access or for prescriber to re-prescribe an alternative route if appropriate.
12. Anaesthetist requested omission	• Refer to prescriber to review the patient's medicine regime if the situation is ongoing and a dose of critical medicine is unintentionally omitted.
13. Other	• Below are potential reasons for using "other" and the actions to be taken.
Contra-indicated due to patient factors	• Monitor patient's condition and, if appropriate, give medicines when the patient's condition allows. • Refer to prescriber to review the medicine.
Route unavailable – e.g. NG/NJ/PEG/PEJ tube unavailable	• Ensure the tube is replaced promptly. • Refer to prescriber for review of route/medicine.
Patient asleep	• Awaken patient and administer medicine. • If this happens more than once then ask prescriber to review medicine and to consider changing to alternate time.
Drug unsuitable due to allergy or allergy status unknown	• If patient has a documented allergy to the medicine prescribed refer to prescriber immediately. • If allergy status unknown attempt to ascertain the patient's allergy status. If unable to do so refer to prescriber immediately to discuss risk/benefit of giving the medicine.
On pass	• Ensure medicines have been arranged with pharmacy for the patient to take with them.

3.3. Monitoring and Assurance

Datix adverse event reports should be submitted if a patient has:

- One dose of a medicine that is considered critical omitted or delayed.
- Two or more consecutive doses of a medicine are omitted or delayed with no appropriate clinical reason.
- Any blank boxes.

Responsibility for monitoring Datix reports lies with the individual area (e.g. ward) and improvement action plans should be developed to reduce the incidence of omitted or delayed doses occurring. Local governance structures should be used to highlight areas of concern and share good practice.

The Excellence in Care (EIC) [9] indicator can be used to determine the percentage of omitted doses and percentage of patients who have had one or more omitted dose, data collection tools for EIC omitted doses and instructions on how to submit the data can be found here under Data Collection Tools. In areas using HEPMA further information on reports will become available as implementation and planning progresses. Individual areas are encouraged to undertake data collection more frequently if issues are identified or further assurance and/or improvement is required.

3.4. Improving Standards

If the EIC measures are not met then a range of interventions can be tested to try to reduce omitted or delayed doses and improve patient safety. These should involve the multi-disciplinary team and could include:

- Education and training on issues relating to medicine administration.
- Agreement on use of perioperative policies when patients are nil-by-mouth. Refer to the NHS Grampian A Guide to the Administration of Medicine in the Perioperative Period [16] for further advice.
- Reviewing medicine storage and stock levels with pharmacy.
- Avoiding interruptions during medicine preparation and administration.
- Consider reviewing the process of medicine rounds, e.g. administering IV medicines at the beginning of regular administration rounds, leaving oral and other medicines to the end.
- Improving communication between staff members when new medicines are prescribed to ensure stocks are accessed promptly and staff administering the medicine know when it is due.
- Using audit results, DATIX reports and HEPMA reports (when available) to look for trends and themes around the reason for non-administration in your area of responsibility.
- Ensuring accurate medicine reconciliation to avoid prescribing omissions.
- Consider whether patients are suitable for Self-Administration of Medicines [15] while in hospital.

4. References

1) Cousins DH et al (2012) A review of medication incidents reported to the National Reporting and Learning System in England and Wales over 6 years (2005-2010), Br J Clin Pharmacol. 2012 Oct; 74(4): 597-604
2) Scottish Patient Safety Programme: Medicines Collaborative
3) NHS Grampian Medicines Reconciliation Protocol (2019)
4) Instructions for NHS Grampian Staff on the In-Patient Prescribing and Administration of Medicines using the NHS Grampian Prescription and Administration Record (2021)
5) HEPMA SOP Administration Not Recorded
6) Specialist Pharmacy Service (2022)
7) Francis, Robert (2013) Report of Mid Staffordshire NHS Foundation Trust Public Enquiry Executive Summary
8) The Rt Hon Lord MacLean (2014) The Vale of Leven Hospital Enquiry Report
9) Excellence in Care
10) HEPMA SOP Non-Administration Reasons Including Uncharted Dose
11) NHS Grampian Policy for the Management of and Learning From Adverse Events (2021)
12) NHS Grampian Organisational Duty of Candour
13) NHS Grampian Prevention of Omitted Doses Poster (2023)
14) NHS Grampian Staff Guidance on Covert Administration of Medication (Adult Policy) (2021)
15) NHS Grampian Policy for Self-Administration of Medicines (SAM) in Hospital (2022)
16) NHS Grampian A Guide to the Administration of Medicines in the Perioperative Period (2019)

5. Distribution List

NHS Grampian Staff

6. Consultation

Acute and Mental Health Medicines Safety Group

Kim Cruttenden	Principal Pharmacist (Clinical)
Matt Jobson	Deputy Head Quality Assurance and Improvement Team
Celia Meneses	Clinical Pharmacist
Karen Beaton	Lead Nurse Digital (HEPMA)