M69

Irene Dix - PA (Nursing & Clinical Governance)

From: Watling, Jeff [Code A

Sent: 06 October 2004 10:25

To: Code A

Subject: PRINTED AND PUT IN BUFF FILE IN YOUR IN TRAY - Notes of meeting on 27th September and associated papers

Please see attached notes of above meeting. Within the notes is a draft list of dates for future meetings. Please may we agree at next meeting, which is at 12.30 pm on Monday 29th November Rehab Seminar Room QAH.

<<NOTES September 2004.doc>>
I am also enclosing:

* Revised guidleine on administration of drugs to patients with swallowing difficulties. Will you please circulate as appropriate for comments and pass them on to Helen or me by beginning of November.

<<Administration of Drugs to Patients with Swallowing Difficulties or Feeding Tubesversion2.doc>>

* Atypical Antipsychotics please see attached revised version from Hampshire Partnership NHS Trust. This is an agenda item of the Area Prescribing Committee on Friday 8th October.

<<aripiprazole letter.doc>> <<oral antipsychotic guidelines printed version.pdf>>

* Policy for Producing Guidelines. Although this is a PHT policy, it has been approved by the Committee and there is an expectation that the associated form will be used to confirm the process and evidence base used for any guideline submitted to the Guidelines and Medicines Management Subcommittee. It does not only apply to those policies lead by members of PHT pharmacy staff.

<<Section 3.23 Issue date. 17.02.04.doc>>

* Please also note the attached letter from Dr Reid for discussion at the next meeting.

<<Fiona Cameron 31Aug 2004.doc>>

* In addition to the draft guidelines circulated at the last meeting the following guidelines are in the process of preparation: cyclosporin, aminophylline, alcohol withdrawal. We are also considering a guideline on methotrexate following NPSA advice. Thereb is also a programme for reviewing the remaining guidelines in the old "yellow book." If you have any suggestions for high priority will you please let Code A or me know and we will incorporate into work programme to be agreed at the November meeting.

Thanks

Jeff

East Hants PCT
Fareham and Gosport PCT
Portsmouth City PCT
Portsmouth Hospitals NHS Trust
Royal Hospital, Haslar
Portsmouth & SE Hampshire LM Committee
Hampshire Partnership NHS Trust

Guidelines and Medicines Management Subcommittee

Notes of Meeting Monday 27th September 2004

5.04.1 Present

Code A Dr Tom
Code A Dr Ian Reid (Chairman), Jeff Watling

Apologies for absence

Code A Dr N Allen, Dr N Lewkowicz, Dr A Holden Code A

5.04.2 Notes of meeting 2nd August 2004 accepted as a correct record. The guideline "Management of Acute Confusion and Aggression," for use the Department of Elderly Mediciine was still under some debate. It has been circulated to the PHT CASE Group for comment. There are still problems with nursing cover but SB to provide JJW with a formal report back in time for next meeting. There are also general issues concerning distribution of guidelines to PCT wards. Potential to have local health economy launch.

5.04.3 Matters arising

3.04.4 j Atypical Antipsychotics – Feedback JJW

No information was yet available concerning the status of these guidelines on Hampshire Partnership wards. JJW to chase

4.04.4

a. Intravenous Vancomycin

The issues with regard to the rate of administration had now been resolved and the guideline had been issued with the rate as described in the data sheet.

d. Adverse Drug Reaction Reporting

The Chairman had written to Graeme Zaki and discussed this issue at Clinical Governance Committee. Agreed that severe adverse reactions should be reported to Clinical Governance Committee

5.04.4 New Guidelines for Approval

a) Digoxin

It was reported that Formulary and Medicines Group had requested a change to this guideline, splitting oral and i/v loading and maintenance doses. Committee requested

clarity with regard to measuring apex heart rate rather than a radial or other pulse rates. Agreed, once modified, can be approved with Chairman's action.

b) Pneumonia, hospital acquired

It was suggested that this guideline needs checking with "Winning Ways" document to check no glaring incompatibility with latest guidance. Formulary and Medicines Group had also requested addition of "confusion" to the list of criteria for assessment of severity of illness. Agreed to check with Dr Underhill as to whether she was satisfied with the guideline. Formulary and Medicines Group had asked to see a revised version of the guideline. Once approved it can be approved with Chairman's action.

c) Anticoagulation

This very detailed guideline had received extensive comment at Formulary and Medicines Group and a significant number of changes had been made. The issue of audit of compliance with guidance needed to be dealt with in a revised version. Guideline to be discussed at Formulary and Medicines Group and brought back to this Committee before issue.

d) Management of Primary Pulmonary Hypertension of the Newborn

This guideline was approved.

e) Administration of Drugs to patients with swallowing difficulties

This guideline was submitted for discussion only – comments please to Helen McHale by the beginning of November. The use of oral syringes and availability on the wards was discussed. Importance of using oral, as opposed to hypodermic syringes was stressed. Guideline to be discussed at Formulary and Medicines Group and brought back to this Committee before issue.

5.04.5 Any other business

Guidelines for Cholesterol Testing and Treatment. These had been approved at APC and were endorsed by the Committee.

5.04.6 Dates for next meetings

12.30pm 29th November, Rehab Seminar Room, C Level QAH (rheumatology block)

Proposed meeting dates 2005. All Mondays at 12.30pm ~~2pm~~ 2nd Monday

14th February, 11th April, 13th June, 15th August, 10th October, 12th December

Hampshire Partnership NHS
NHS Trust

Guidelines for Prescribing of Oral Antipsychotics

(Joint Primary and Secondary Care) **General Adult Population**

Condition	First Choice	Level of evidence	Second Choice	Level of evidence
New episode psychosis * *(Efficacy of all atypicals – II)*	Risperidone Amisulpride	NICE + £ NICE + £	Olanzapine Quetiapine Low dose typicals [3,4,5]	NICE + £ NICE + £ £
Extrapyramidal Symptoms including secondary negative symptoms	Quetiapine	I + £	Olanzapine Clozapine	I + £ I
Tardive Dyskinesia with Other Antipsychotics	Quetiapine Olanzapine	III II	Clozapine	IV
Hyperprolactinaemia with other Antipsychotics *(NB: see 8)*	Quetiapine	I	Olanzapine	I
Sexual Dysfunction	Olanzapine Quetiapine	III IV		
Diabetes *– Caution with Olanzapine, Clozapine, Quetiapine*	Amisulpride	Absence of reports	Risperidone Fluphenazine Haloperidol	IV IV IV
Weight gain *(If significant check for diabetes)*	Advice and support Amisulpride Sulpiride Fluphenazine	III	Quetiapine	III
Postural hypotension	Amisulpride Sulpiride	IV	Haloperidol Trifluoperazine	IV
Can't / Won't take tablets	Risperidone liquid Amisulpride liquid	£ £	Olanzapine velotabs	
Psychosis after unsuccessful trials of two antipsychotics *(at least one an atypical)* at max tolerated dosages for 6 – 8 weeks [6]	Clozapine	II, NICE	Another atypical	
Inadequate response to Clozapine	Add Sulpiride Add Amisulpride	II IV		
Poor adherence despite good tolerability ***or*** patient preference for depot (NICE)	Depot typical	II	Depot Risperidone	II
Pregnancy and Breastfeeding	Haloperidol Chlorpromazine And refer to Perinatal Service	IV IV	Seek Perinatal Service advice	

Levels of evidence: I Metanalyses of RCTs; II RCTs; III Non R.CTs; IV Other studies; V Consensus; £ more cost effective

* = NICE Guidelines recommend offering oral atypicals to all patients with schizophrenia.

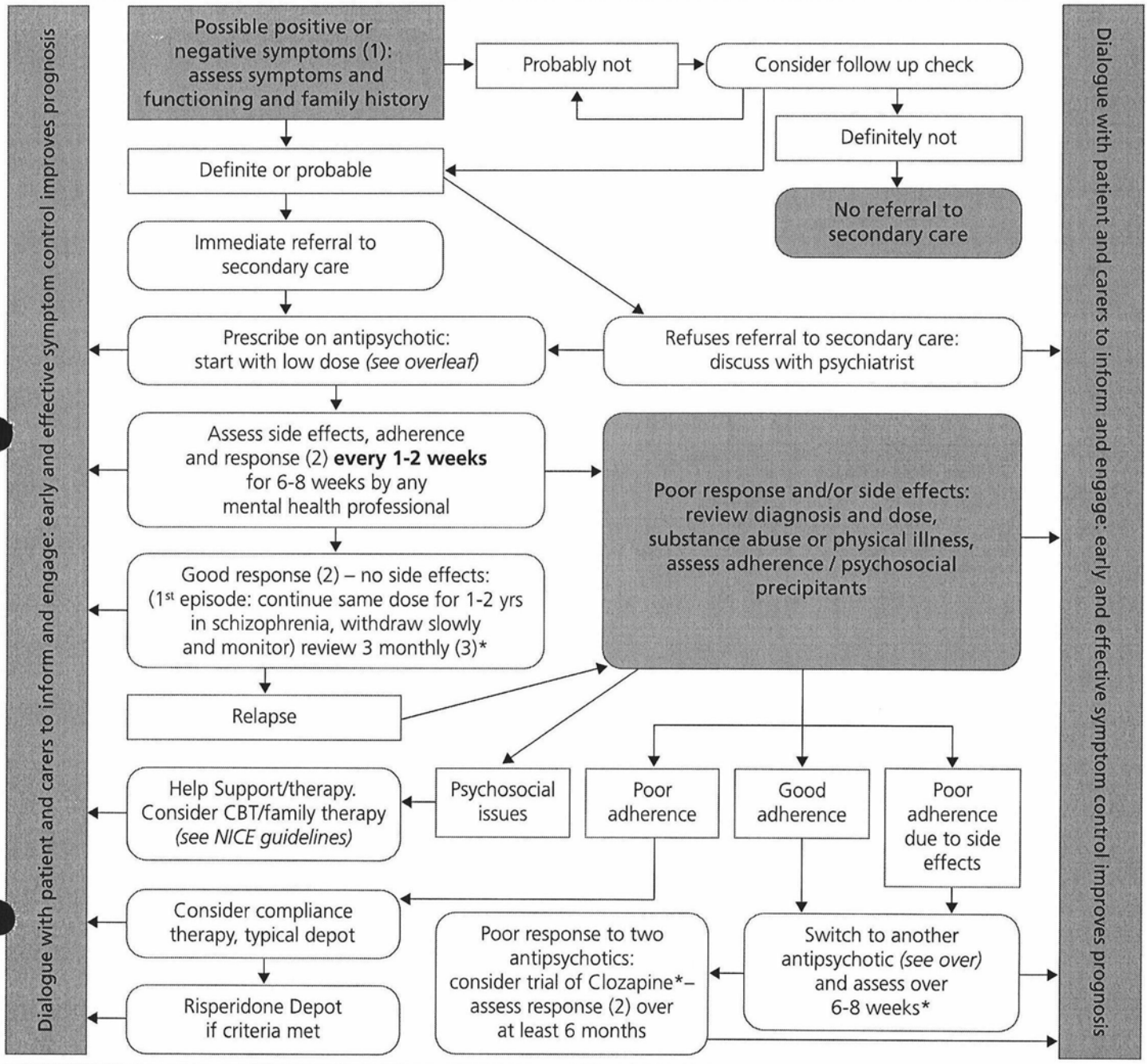
1. Involvement of patient in treatment choice and consultation with any care/advocate **must** be recorded in notes*
2. Except when switching, **use one** antipsychotic at a time.
3. **Lowest effective doses** should be used. Low doses particularly appropriate for negative symptoms and first episode.

Typicals Low starting doses	- Chlorpromazine 75 mg	more sedative ↑	
	- Haloperidol 2 mg		
	- Trifluoperazine 5 mg	less sedative ↓	***NB: sedation is dose related***
	- Sulpiride 200 mg		
Atypicals Low starting doses	- Quetiapine 100 mg	more sedative ↑	
	- Olanzapine 2.5 mg		
	- Risperidone 1 mg		
	- Amisulpride 50 mg	less sedative ↓	

4. When titrating up wait at least 2 weeks to judge response.
5. Close and frequent monitoring of side effects is essential when initiating drug treatment, particularly with typical antipsychotics. The emergence of unacceptable side effects should usually lead to a lowering of the dose or changing the drug according to the guidelines. Anticholinergics may be misused, worsen tardive dyskinesia and impair memory. Their use should be minimised and monitored regularly. (Side effect checklists are encouraged – available from Chief Pharmacist, WHT, tel 8087 4023.
6. Control of behavioural disturbance alone should not be accepted as adequate treatment response: relief from positive and reduction of negative symptoms with improved functioning, minimal side effects, and acceptability to the patient ("recovery") should be the aim.
7. For short term sedation consider Diazepam, Lorazepam or Clonazepam with or without antipsychotics as required for psychotic symptoms. (See rapid tranquillisation guidelines in secondary care)
8. Hyperprolactinaemia can confer a contraceptive effect. When changing drug regime ensure adequate contraception as appropriate.

Pharmacological Management of Schizophreniform Psychosis

Hampshire Partnership NHS
NHS Trust



NOTES: * = NICE Guidelines

(1) **Positive Symptoms**
Hallucinations, thought disorder/loosening of associations/ conceptual disorganisation/suspiciousness/persecution/delusions

Negative Symptoms
- Unresponsive affect
- Emotional withdrawal
- Passive/apathetic/social withdrawal
- Difficulty with abstract thinking
- Poor spontaneity/flow of speech

(2) "Response" should be judged on all of:
- positive symptoms
- negative symptoms
- cognitive symptoms
- personal, social, occupational functioning

(3) **Regular review of all the issues below**
for any patient continuously receiving antipsychotics for a psychotic illness should take place at least once a year. Responsibilities for doing this need to be agreed between primary and secondary care and the patient :
1. Response – see (2)
2. Side effects
3. Adherence
4. Needs: (a) Information
   (b) Social support
   (c) Psychological support/therapy
   (d) Occupation/employment
   (e) Physical health (including at least diabetes, BP, ht/wt, smoking)
5. Contingency plans: relapse, crisis, **including** record of advance directive on treatment choice*
6. Carer needs

Approved by Medicines Management Committee January 2004. Approved by Southampton & Winchester DPC February 2004 and Guidelines and Medicines Management Committee (Portsmouth and SE Hants). Review date January 2005.

Please email any comments to: **ross.mitchell@wht.nhs.uk**

The printing of these guidelines have been funded by educational grants from AstraZeneca, Eli Lilly & Co. Ltd., Janssen-Cilag Ltd., Novartis Pharmaceuticals UK Ltd, and Sanofi-Synthelabo who were not involved in the development of these guidelines.

CS5804 - June 2004

TRUST POLICY FOR PRODUCTION OF DRUG THERAPY GUIDELINES

CONTENTS LIST:

APPENDICES:

Originator:	Pharmacy Services Manager. Jeff Watling
Approval Route:	Formulary and Medicines Group Area Prescribing Committee Executive Membership of Clinical Governance Committee
Approved/Ratified by:	Sub-Group of Clinical Governance Committee 06.02.2004
Issue No:	2
Date of issue:	17.02.2004
Pilot Completion Date:	N/A
Review Date:	January 2005
Audit Date:	January 2005

1. ITEM

Policy for the Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

2. POLICY STATEMENT

This document outlines the policy to ensure the consistent preparation, approval, publishing, audit and review of Drug Therapy Guidelines for use within Portsmouth Hospitals NHS Trust and throughout secondary care services within the Portsmouth and South East Hampshire health economy.

3. DEFINITIONS AND SCOPE

Drug Therapy Guidelines

Guidance documents prepared to assist clinicians, nurses and pharmacists in the safe control and administration of medicines for specific clinical conditions.

4. ROLES AND RESPONSIBILITIES

Guideline Project Manager

A member of pharmacy staff designated, by the Pharmacy Services Manager to project manage the process for development of a Drug Therapy guideline.

Guideline Development Group

A group established by a Guideline Project Manager to prepare a Drug Therapy Guideline.

Medicines Management Committee

The Formulary and Medicines Group (Trust) or Medicines Management Committee (District) will be responsible for the approval of the guidelines developed. They have the responsibility for ensuring adherence to corporate guidance.

The approval group must ensure that all guidelines:

- are based on as up-to-date evidence as possible;
- are NOT discriminatory along the adult age continuum, unless there is clear;
- evidence for age-defining contra-indication and this is recorded;
- are discriminatory for Paediatrics;
- have patient consultation in their development;
- have undergone the broadest multi-disciplinary consultation, including aspects of equality and human rights.

Responsibilities for Specialty/Department/Group owned Guidelines, their adoption and access is detailed in Appendix 1.

5. EVIDENCE BASED PROTOCOL

ACTION	RATIONALE	EVIDENCE
Staff preparing Drug Therapy Guidelines will comply with PHPSWI07 001U (Appendix 2) Preparation and approval of Drug Therapy guidelines	Following the Work Instruction ensure a consistent format for Drug Therapy Guidelines.	See attached PHPSWI07 001U
Drug Therapy Guidelines will be submitted for approval to Committees specified in PHPSWI07 001U (Appendix 2)	This will ensure that all Drug Therapy Guidelines are submitted to multidisciplinary committees for approval prior to publication	See attached PHPSWI07 001U
Drug Therapy Guidelines will be published on the Portsmouth Hospitals Intranet Website and Portsmouth and SE Hants Extranet Website as read or print only documents, protected from amendment by password control.	This will ensure that all Drug Therapy Guidelines are widely available to the Portsmouth and S E Hants health economy. The latest version will be maintained on the web-server, obviating the need for an alternative document control system	The Portsmouth Hospitals Pharmacy Service will maintain a web-server specifically for the purpose of making available controlled documents associated with the Clinical Support Division Quality Systems, Drug Therapy Guidelines and Clinical Governance.
Drug Therapy Guidelines will be subject to an audit programme as determined by the approval committee. Such that compliance with recommendations is audited at an appropriate period after publication	This will ensure that recommendations are implemented and feedback obtained from interested parties, which may be useful to the review process	See attached PHPSWI07 001U
Drug Therapy Guidelines will be subject to review at a frequency agreed by the Guideline Development Group but in addition new Drug Therapy Guidelines will be reviewed within one year after publication	This will ensure that Drug Therapy Guidelines are reviewed within one year of first publication and at intervals, thereafter, agreed with the group responsible for their development	See attached PHPSWI07 001U

6. CONSULTATION / FORUM FOR DISCUSSION

Area Prescribing Committee
Clinical Governance Manager
Formulary and Medicines Group
Policy for Policies Group
Principal Pharmacists

7. AUDIT STANDARDS / AUDIT TOOL

The Medicines Management Committee is responsible for ensuring the audit programme of this policy is undertaken and reported, as agreed.

ASPECT OF CARE/OUTCOMES	EXPECTED STANDARD/ TARGET	SOURCE OF DATA COLLECTION
Preparation of Drug Therapy Guidelines will be in accordance with PHPSWI07 001U Appendix 2	100%	Documentation of preparation process on PHPS Form 07 001U Appendix 3
Approval of Drug Therapy Guidelines will be by the committee specified in PHPSWI07 001U Appendix 2	100%	Documentation of preparation process on PHPS Form 07 001U Appendix 3
Publication of Drug Therapy Guidelines will be as defined in this policy Appendix 4	100%	Review of Portsmouth Hospitals Intranet Website and Portsmouth and SE Hants Extranet Website.
As a minimum, compliance with Drug Therapy Guidelines will be audited at an interval determined by the approval committee specified in PHPSWI07 001U Appendix 2	100% audits undertaken at the agreed intervals	Documentation of audit process on PHPS Form 07 001U Appendix 3 and appendices
As a minimum, content of Drug Therapy Guidelines will be reviewed at intervals defined by the committee specified in PHPSWI07 001U. Appendix 2	100% reviews undertaken at the agreed intervals	Documentation of review process on new PHPS Form 07 001U Appendix 3

8. EDUCATION & TRAINING

It is the Pharmacy Department's responsibility to ensure appropriate education and training on new and revised guidelines is available. It will ensure that availability of Drug Therapy Guidelines is highlighted in induction training for all staff involved in the medication process. Specific training will also be provided for junior medical staff, including schemes for locum staff.

It is the responsibility of line managers to ensure individuals are released to access the necessary education and training.

It is the responsibility of individuals to up-date their knowledge and practice to maintain corporate standards, as described in the Drug Therapy Guidelines.

9. RISK MANAGEMENT

The purpose of the guidelines, is to improve patient safety by helping to limit risk .

Information on relevant adverse incidents will be reported to the specified Guideline Project Manager for actioning and will be considered in the production of new, or revision of existing, Drug Therapy Guidelines.

10. ASSOCIATED DOCUMENTATION

PHPSWI07 001U Preparation and approval of Drug Therapy guidelines. Appendix 2

APPENDIX 1. Adoption & Access to Specialty/Department/Group owned Guidelines.

1. All guidelines are to be created and managed by a designated post holder. There is a need to also identify a second person to support.

2. The guidelines will be alphabetically stored electronically in an appropriately named folder on an ICT approved server.

3. Permissions to the guidelines server will be read-only trustwide, full control for designated post holder and support, the Trust Policies Officer (TPO), and ICT administrators.

4. All guidelines will be available on the specialty/department/group web site, and via a link from the Corporate Policies & Guidelines home page, directly into the guidelines folder (hence the need for guidelines to be alphabetically stored).

5. Redundant guidelines will be archived electronically by year. The TPO will maintain a Corporate archive of all specialty guidelines.

6. All guidelines must be appropriately titled and show an issue date. This information must be reflected in the electronic file name.

7. When the electronic guidelines folder has been set up and populated, a list of available guidelines and their issue dates will be forwarded to the Sub-Group Clinical Governance Committee (SGCGC). This initial list will include details/contact details of the post holder responsible for managing the guidelines electronic folder, and those of their support.

8. Guidelines should not be made available until SGCGC adoption/ratification has been given. The formal adoption/ratification process assures that the trust accepts full responsibility.

9. Subsequent to adoption/ratification, the SGCGC minute taker will inform the relevant responsible persons, including the TPO. Circulation of updated lists will be via the TPO policy information group email. The TPO subsequent to SGCGC adoption/ratification, access guideline archive folders and copy/corporately archive redundant guidelines.

10. Subsequent lists of new or updated guidelines showing issue dates, will be sent to the SGCGC. The SGCGC meets on the first Friday of every month. Agenda items must be sent electronically, at least one week in advance, to Cathy Harding, PA to the Medical Director, Governance.

Appendix 2. PHPSWI07 001U Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

This work instruction is issued and controlled by Portsmouth Hospitals Pharmacy Services. Changes may only be authorised by the Pharmacy Services Manager/Head of Purchasing. Authorised originals of this work instruction are controlled documents maintained on the Portsmouth Hospitals Intranet Website.

AUTHORISED ORIGINALS ON THE INTRANET WEBSITE MAY BE USED AS WORKING DOCUMENTS. PRINTED PAPER VERSIONS OF THIS WORK INSTRUCTION MAY BE USED AS WORKING DOCUMENTS BUT ARE CONTROLLED DOCUMENTS ONLY ON THE DAY THEY ARE PRINTED.

Originator: Code A Date: 19 May 2003

Authorised: Jeff Watling Date: 19 May 2003
Head of Purchasing/Pharmacy Services Manager

Date Printed: (Self-generated on day of printing).
Date of Last Amendment:: Mel Stevens 23 Oct 2003

Portsmouth Hospitals NHS Trust has a policy to ensure the consistent preparation, approval, publishing, audit and review of Drug Therapy Guidelines. This Work Instruction describes how this will be achieved and documented.

2. Responsibility

2.1 The Head of Purchasing/Pharmacy Services Manager will be responsible for ensuring that this Work Instruction supports the Trust Policy for the Preparation, Approval, Publishing and Review of Drug Therapy Guidelines.

2.2 All staff within Portsmouth Hospitals Pharmacy Service will be responsible for ensuring that this work instruction is followed and that requirements for review and amendment are notified to the Departmental Manager.

3. References

3.1 ISO 9001:2000 para 4.2.3 Control of Documents

3.2 Trust Policy and Protocol for preparation, approval, publishing, audit and review of Drug Therapy guidelines

4. Definitions:

4.1 **PHPS** – Portsmouth Hospitals Pharmacy Service

4.2 **Drug Therapy Guidelines** - Guidance documents prepared to assist clinicians, nurses and pharmacists in the safe control and administration of medicines for specific clinical conditions.

4.3 **Guideline Project Manager** A member of pharmacy staff designated, by the Pharmacy Services Manager to project manage the process for development of a Drug Therapy Guideline.

4.4 **Guideline Development Group** A group established by a Guideline Project Manager to prepare a Drug Therapy Guideline.

5. Format of Drug Therapy Guidelines

5.1 All Drug Therapy Guidelines prepared by Portsmouth Hospitals Pharmacy Service will follow the format specified in this Work Instruction.

5.2 All text will be in Arial font type (or equivalent) and 12 point font size throughout unless otherwise indicated

5.3 Format of Text

5.3.1 The front page will carry the following information:

a) Standard header (see attached example) Including a guideline reference number, approval date by Guidelines and Medicines Management Sub-Committee and review date (see attached example)
b) Title in the form a bordered text box or single column single row table with white on black text font size 16pt (see attached example).
c) Introduction defining the reasons for the Drug Therapy Guideline, its objectives and the patients to whom it will apply.
d) Main text in the format of attached example
e) Reference to appendices, associated forms etc.

6. Process for preparation of Drug Therapy Guidelines

6.1 The Pharmacy Services Manager will ensure that a system is in place to ensure that a member of pharmacy staff will be designated to project manage the process for development of Drug Therapy guidelines.

6.2 Drug Therapy Guidelines will be prepared independently, by NHS staff working within the Portsmouth and South East Hampshire Health Economy. Preparation of Drug Therapy Guidelines will be independent of funding or editorial influence from the pharmaceutical industry.

6.3 The Guideline Project Manager will establish a Guideline Development Group with representation from professional interests e.g. clinicians from appropriate specialities, nurses, pharmacists and other healthcare professionals

6.4 The Guideline Project Manager will ensure that, where appropriate, there is representation form other interest groups – including patients, during the guideline preparation process.

6.5 The Guideline Project Manager will document membership on PHPS Form 07 001U.

6.6 The Guideline Project Manager will document the sources of information used to select the evidence, on which the guidelines are based. Key references will be listed in the Drug Therapy Guideline but all references used will be documented on PHPS Form 07 001U.

6.7 The Guideline Project Manager will document, where possible, the methods used to interpret and assess the strength of evidence, on which key recommendations are made. In particular there should be an explicit link between major recommendations and the level of supporting evidence.

6.8 The Guideline Project Manager will document the methods used to formulate the recommendations. In particular a record will be made of how the views of interested parties not on the Guideline Development Group were taken into account.

6.9 If the Drug Therapy Guideline is to be piloted prior to implementation the Guideline Project Manager will manage the pilot study, document changes to the Drug Therapy Guideline as a result of the pilot study on PHPS Form 07 001U. Documentation of audits associated with the pilot study will be appended to PHPS Form 07 001U.

6.10 The text of the Drug Therapy Guideline should include as a minimum:

- the reasons for developing the Drug Therapy Guideline
- the objectives of the Drug Therapy Guideline
- a description of the patients to which the Drug Therapy Guideline should apply – this must not be defined by age
- definitions
- a description of the condition to be detected, treated or prevented
- a definition of alternative options for management of the condition, e.g. first/second line treatment, medical or surgical management
- a presentation of the recommendations
- a statement of how the Drug Therapy Guideline is to be disseminated
- a description of the health benefits likely to be gained from following the recommendations
- a description of the potential harm or risks that may result from the recommended management
- reference(s) to key national guidelines
- a comment concerning evidence base

6.11 In addition, the text of the Drug Therapy Guideline may include:

- estimated costs of expenditures likely to occur from the recommended management

- an explicit statement of how patient preferences should be taken into account in applying the guidelines
- If appropriate, the identification of standards or targets or measurable outcomes, that can be monitored

7 Approval

7.1 The Guideline Project Manager will ensure that Drug Therapy Guidelines are independently approved before publication. As a minimum this will be through the following:

- Formulary and Medicines Group
- Sub Group of Clinical Governance Committee.

In addition, any guidelines likely to affect elderly patients or other patients within the care of Primary Care Trusts will be through the following:

- Guidelines and Medicines Management Committee
- Area Prescribing Committee
- PCT Clinical Governance and Risk Management Committee

7.2 The Guideline Project Manager will document approval dates on PHPS Form 07 001U

8 Publishing

8.1 On completion of the approval process the Guideline Project Manager make any necessary amendments and prepare a final version ready for publishing. This will then be passed to the appropriate document controller for publishing on the Trust Intranet Web-site and Portsmouth and ES Hants Extranet, if appropriate.

8.2 The Guideline Project Manager will document final version and publishing dates on PHPS Form 07 001U

9 Audit and Review

9.1 The Guideline Project Manager will liaise with the Guideline Development Group to agree a review date for the Drug Therapy Guideline and organise a method for review approximately three months prior to the review date. This process will be documented on PHPS Form 07 001U. The review process will be documented using a new PHPS Form 07 001U.

9.2 The Guideline Project Manager will liaise with the Guideline Development Group to agree an audit process for the Drug Therapy Guideline and organise an audit, preferably in conjunction with the Clinical Audit Manager for the Trust(s) concerned. Documentation of audits associated with the pilot study will be appended to PHPS From 07 001U. Any reviews of the Drug Therapy Guideline as a result of the audit process will be documented using a new PHPS Form 07 001U.

9.3 Recommendations from audits will be reported to the Departmental Clinical Governance (Pharmacy Managers') Meeting for recording action and follow-up.

Appendix 3. PHPS Form 07 001U Documentation of Preparation, Approval, Publishing, Audit and Review of Drug Therapy Guidelines

(1of 4)

Record of Preparation, Publishing, Audit and Review of Drug Therapy Guidelines

Preparation

Title of Drug Therapy Guideline	
Reference number	
Name of Guideline Project Manager	

Membership of Guideline Development Group	**Date**
1 **2** **3** **4** **5** **6** **7** **8**	

Methods used to formulate recommendations

Documentation of Development Process		
Reviewing groups		**Date**
Initial proposal	Guideline Development Group	
Draft 2		
Draft 3		
Draft 4		
Finalisation by Guideline Development Group		

Documentation of Minimum Requirements (state reasons for exclusion and enter the information if it is not included for any other reason than it is not applicable in the boxes below)	
Requirement	**Included**
Reasons for developing drug therapy guideline	☐
Objectives of drug therapy guideline	☐
A description of patients to whom the guideline should apply (not ageist)	☐
A clear description of condition to be detected, treated or prevented	☐
Clear description of health benefits likely to be gained from following the guidelines	☐
Clear definition of alternative options for management of the condition	☐
Statement of how the guideline to be disseminated	☐
Clear presentation of the recommendations	☐
An adequate description of harms and risks associated with recommended management	☐
Reference to key national guidelines	☐
Comment concerning evidence base	☐

Documentation of Additional Information	**Incl**
Estimated costs of expenditures likely to occur from the recommended management	☐
Explicit statement of how patient preferences should be taken into account in applying the guidelines	☐
Clear definition of standards or targets or measurable outcomes, that can be monitored	☐

References Used in Preparing Drug Therapy Guideline

Methods Used to Interpret Strength of Evidence

PORTSMOUTH HOSPITALS NHS TRUST **Section 3.23**
CLINICAL POLICIES AND GUIDELINES
Approval (3 of 4)

Documentation of Approval Process	
Group	**Date**
Approval by Formulary and Medicines Group	
Approval by Guidelines and Medicines Management Committee	
Approval by Area Prescribing Committee	
Ratified by sub-committee of Clinical Governance Committee	

Publishing and Dissemination

Final version prepared by;		**Date**
Final version placed on intranet website by		**Date**
Intranet address		
Alternative publication methods		

Pilot Process (if applicable)	**Duration**
Audit of Pilot Process	
Changes made as a result of pilot process	

Review

Review date/frequency proposed by Guideline Development Group		
Proposed review methodology		
Review date and method agreed by relevant approval committee?	**Yes** ☐	**No** ☐
Revised and approved review date or method		
Review completed by		**Date**
Changes to guideline required?	**Yes** ☐	**No** ☐
Revised version prepared by*		**Date**
Revised version placed on intranet website by:		**Date**
Intranet address:		

* Detailed documentation of review of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

Audit (4 of 4)

Audit date proposed by Guideline Development Group			**Date**
Proposed audit methodology			
Audit date and method approved by relevant approval committee?		**Yes** ☐	**No** ☐
Revised and approved audit date or method			
Audit completed			**Date**
Results reported by			
Results reported to			
Changes to guideline required?		**Yes** ☐	**No** ☐
Revised version prepared by*			**Date**
Revised version placed on intranet website by			**Date**
Intranet address			

* Detailed documentation of audits of each drug therapy guideline will be undertaken using a new PHPS Form 07 001U in accordance with the requirement of PHPSWI07 001U.

Appendix 4. Template Guideline

(Header to show guideline title on all pages)

TITLE

Guidance on subject…

Introduction

This guidance supports

Subheading

Content text …

Name, Post manages this guideline (ext XXXX)
See Trust Policy for the Production of Drug Therapy Guidelines
Approved by: Date
Ratified by: Date
Review date:

Page x of y (in footer of every page please, with Date of Issue)

Portsmouth and South East Hampshire
Guidelines and Medicines Management
Committee

NHS

Drug Therapy Guideline No 52.01 month 2004
Administration of Drugs to Patients with Swallowing Difficulties or Feeding Tubes

Administration of Drugs to Patients with Swallowing Difficulties or Feeding Tubes (Draft)

Introduction

This guideline has been developed to aid drug administration when patients are unable to take solid oral dosage forms either because they have swallowing difficulties or feeding tubes.

This guideline gives lists of commonly used drugs which:
Exist in liquid formulations;
Are tablets not specifically labelled dispersible by the manufacturer, but can be crushed and/ or will dissolve or disperse in water
Are injections that can be given orally down tubes.
May interact with tube feeds.

This guideline applies to all patients under the care of practitioners working for the NHS Trust/ Primary Care Trusts listed below.

Accountability

The administration of drugs in any other way than that which the manufacturer intended ie via feeding tubes, crushed, dispersed in water or injectable preparations orally, is unlicensed and therefore requires a Doctors written prescription. In these cases the prescriber and practitioner accept liability for any adverse effects resulting from this administration.
The enabling protocol at Portsmouth Hospitals NHS Trust allows pharmacists to change the form of medications used and how they are administered if necessary. However all changes should be signed. (Refer to the enabling protocol for full details)

Recommendations

Choice and Prescribing of Drugs for Patients with feeding Difficulties of feeding Tubes

Recommendations for Patients with Swallowing Difficulties

These steps should be considered in order, when deciding how to give the preferred preparation to patients with swallowing difficulties

1. All medication should be reviewed to determine whether it is necessary or not.
2. Determine whether there is a liquid alternative available
3. Determine whether there an alternative licensed route for the drug exists eg rectal, parenteral or buccal and see if the doctor is willing to prescribe the alternative.
4. Determine whether the medication can be crushed or opened and see if the doctor will prescribe the medication to be given in this way.
5. Determine if the injectable preparation can be given orally
6. Ask doctor to consider prescribing alternative drugs with similar pharmacology.

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Recommendations for Patients with feeding Tubes

These steps should be considered in order, when deciding how to give the preferred preparation to patients with feeding tubes.

1. All medication should be reviewed to determine whether it is necessary or not.
2. Determine whether an alternative licensed route for the drug exists eg rectal, parenteral or buccal administration. See if the doctor is willing to prescribe this alternative.
3. Determine whether a liquid or soluble tablet is manufactured.
4. Determine whether tablets not specifically licensed as soluble or dispersible will actually dissolve in water or can be crushed.
5. Determine whether an injectable formulation of the drug can be administered orally.
   Note some tablets should not be crushed or dissolved in water at all. (see table 1)
6. Consider prescribing an alternative preparation with similar pharmacology that can be given in a licensed manner or via a tube.

A flow chart and lists of drugs has been prepared to aid administration when a patient can not swallow or has a feeding tube in place and when it is not possible to give the drug by an alternative licensed route.

Table 1 Medicines that should never be crushed or opened

Formulation	Common Abbreviations	Reason for not crushing
Modified Release	Frequently identifiable by the letters: Mr, LA,SA,CR,XL or SR Or words: Retard or slow In the title	Medicine designed to be released over prolonged period. Mechanism for slowing absorption may be damaged by crushing. Patient receives full dose quicker than expected and subsequently little or no dose at all for a period of time
Enteric Coated	Usually identifiable by the letters: EN or EC	Medicine designed not to be released in the stomach. Enteric coating would be destroyed by crushing
Hormonal Cytotoxic Steroidal	Eg tamoxifen, methotrexate, dexamethasone	Drug may go into the air by crushing leading to the nurse inadvertently receiving the dose.
Nitrate		Concerns raised over explosive nature.

Notes

Drug Feed Interactions

Some drugs may interact with enteral feeds to reduce the drugs efficacy or block the feeding tube. In these cases discontinuing the feed temporarily when administering these drugs may be necessary. (see column 4 table 2 for lists of drugs that interact with feeds and advice on action to take.)

Tube Tip Position and Drug Absorption

Some drugs may not be absorbed from the site of administration of particular tubes, eg jejunal tubes. Please contact the medicines information centre (ext 6632) for information on the absorption of drugs when administered via jejunal tubes and monitor the patient for signs of drug failure.

Dosage Conversions

When converting some drugs from tablet administration to liquids dosage alterations may need to be made in order to ensure therapeutic equivalence.

Administration

Equipment Necessary

Syringe Type and Size

- Ideally Oral or enteral syringes should be used when administering liquid or crushed drugs orally or via tubes to avoid the drug being administered intravenously.
- IV syringes may be used if absolutely necessary until enteral syringes are approved. These syringes should be clearly labeled for **enteral use only.**
- Ideally syringes that are greater than 30ml should be used to avoid high pressures and tube rupture. However it is common practice to use 10-20ml syringes
- A white funnel adapter may be necessary depending on the tube.

Type of Water

Ordinary tap water should be used.

Infection Control and Safety

Wash hands and wear gloves.

Pestle and mortar or tablet crusher may be necessary if the tablet won't dissolve by itself.

Crushing/ Preparing the Drug

It is important that exposure to drug powder is kept to a minimum therefore tablets should be dissolved in the barrel of a syringe if possible:

- Take the plunger out of the syringe,
- place the table in the syringe,
- replace the plunger ,
- draw up 10-15ml of water

- Label for enteral administration only.
- cap the syringe
- agitate the syringe until the tablet has dissolved.

Tablets that Will Not Dissolve by Themselves (see column 3 (table 2))
Crush uncoated tablets using a pestle and mortar or tablet crusher and then dissolve the tablets in 10-15ml of water and then draw up into a syringe.
Tablet crushers should be cleaned between being used for different tablets.

Syrups
Dilute syrups with an equal amount of water immediately before administration.
This will reduce viscosity and minimise diarrhea caused by giving high osmolality liquids.

Capsules
Open the capsules and tip the powder into the medicine pot.

Step by Step Guide
- See flow chart
- Flush before feeds and after administering each drug
- Administer each drug separately, DO NOT MIX DRUGS IN THE SAME SYRINGE!
- Do not add medication directly to the feed due to the risk of incompatibility
- Seek further advice for fluid restricted or paediatric patients as flushing volumes may need to be reduced.
- Record all water used on the fluid balance charts.
- Ensure the drug is administered down the correct tube (not down the aspiration gastric decompression port)

Tube Blockage
Tube blockages cost money, nursing time, limits feeding time and drug intake and can cause trauma to the patient.
- Inadequate flushing is the most common cause of blockage
- Using the wrong formulation of medication can also cause tube blockage.
- If flushing with warm water does not unblock the tube, seek specialist advice from the nutrition nurses, do not apply excessive force.

Discharge Planning
Ensure the agreed feed and drug regimen are practical in the community setting.
The nurses on the ward should refer relevant patients to the ward pharmacist or nutrition nurse to ensure that the medication chart and patient medication record (appendix 1 and 2) are complete.
Ensure all necessary information is given to the community pharmacist, GP, carer and patient. (see appendix 1 and 2, medication chart and patient medication record.

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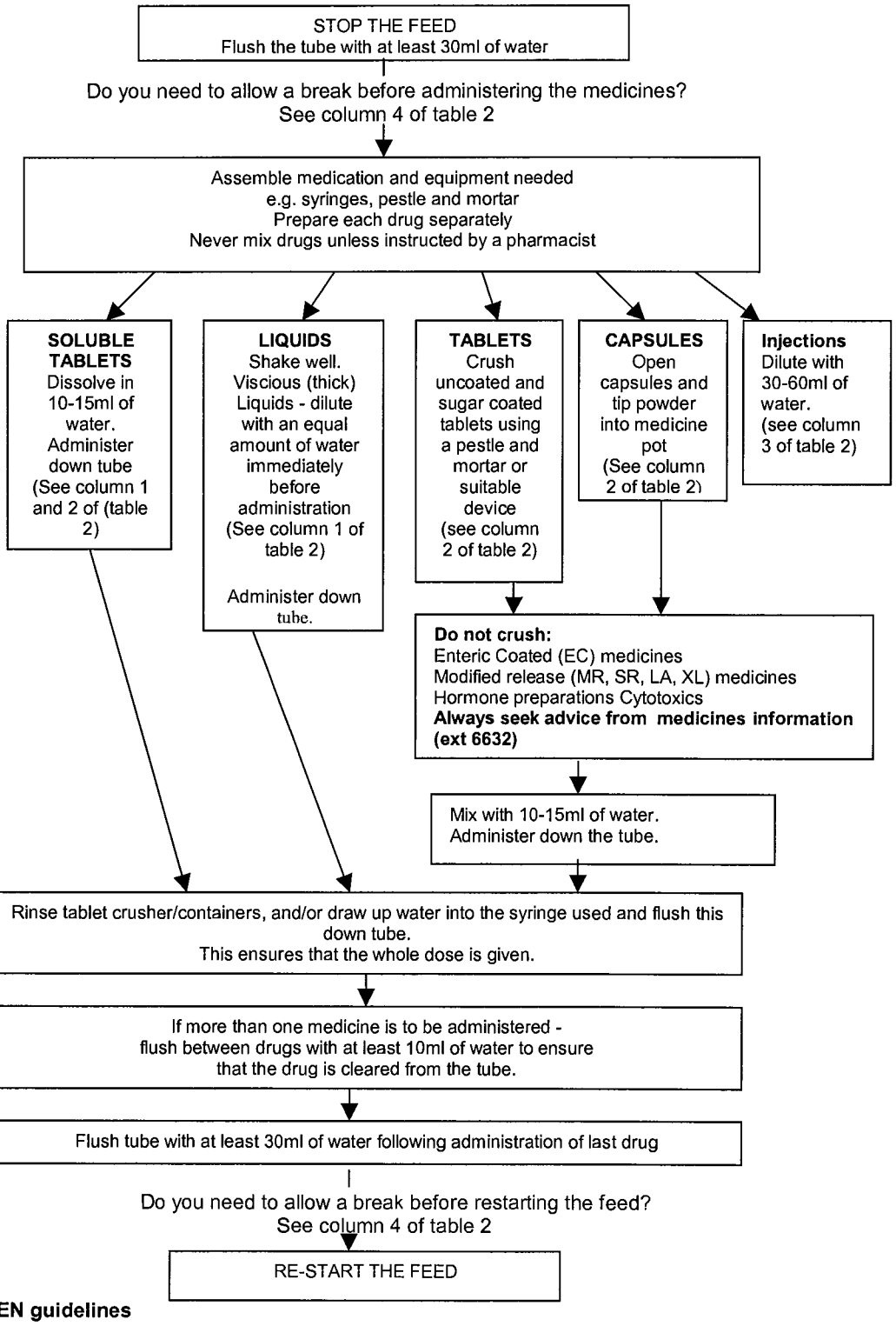
ADMINISTERING DRUGS VIA ENTERAL FEEDING TUBES: A PRACTICAL GUIDE



Modified from BAPEN guidelines

East Hampshire Primary Care Trust, Fareham and Gosport Primary Care Trust, Portsmouth City Primary Care Trust, Portsmouth Hospitals NHS Trust.

Table 2: Administration of Medication When Patients are unable to Swallow/ Have a Feeding Tube

Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Abacavir	Solution available	NI	NA	
Acetazolamide	No	Non mr tablets only. The mr tablets must not be crushed	Dilute reconstituted injection with 30-60ml of water before administering	NI
Acetylcysteine 200mg/ml	No	No	Dilute by a factor of four. Once opened the ampoule may be covered with cling film and stored in the fridge for up to three days. Bitter to taste.	NI
Aciclovir	Suspension and dispersible tablets available	NI	NI	NI
Alendronate	No	Do NOT Crush		
Alfacalcidol	Drops available	NI	NI	NI
Allopurinol	No	Yes (tablets will disperse in 10 minutes)	NA	NI
Aluminium containing antacids	NI	NI	NA	Protein- aluminium complexes may form which may obstruct the tube, or bind with phosphate to cause hypophosphataemia. Do not give Al antacids or stop feed and flush tube.
Amantadine	Syrup available	No do not open capsules		
Amiloride	Solution available	NI	NA	NI

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Aminophylline	Convert to theophylline liquid Theophylline dose = aminophylline dose x 0.8. Give in 3 to 4 divided doses. Monitor levels	No	NI	
Amiodarone	No	Yes (Crush and disperse tablets)	NI	NI
Amitriptyline	Solution available	APS brand can be crushed	NI	
Amlodipine	Syrup available from Rosemont (special)	Yes (Crush and Disperse in water) (light sensitive therefore use immediately	NA	
Amphotericin	No	NA	Fungizone. For a 5mg/ml solution add 10ml of water for injections to a 50mg vial and dissolve completely. Shake well. Non systemic effect only.	
Anastrazole	No	Yes (takes more than 2 minutes)	NA	
Ascorbic acid	Effervescent tablets available	NI	NA	
Aspirin	Dispersible tablets available	Do not crush ec tablets	NA	Stop feed 1 hour before and restart 2 hours after drug administration
Atenolol	Syrup available	NI	NI	
Atorvastatin	No	Pfizer- can crush but not very soluble. Must ensure all drug is administered	NA	
Azathioprine	Suspension made by pharmacy. (Injection licensed for IV use in patients who have difficulty swallowing)	Tablets should disperse in 5 minutes CAUTION cytotoxic do not crush.	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Baclofen	Liquid available	Yes (Lioresal takes 5 minutes)	NA	
Bendroflumethiazide	No	Yes (will disperse in 5 minutes)	NA	NI
Betahistine	No	Yes crush and disperse tablets)		
Bezafibrate	No	Yes (do not crush MR tablets)	NA	
Bisoprolol	No	Crush tablets and mix with water and administer immediately.	NA	
Bisphosphonates	No	No	NA	Stop feed 4 hours before and restart 1 hour after administration
Bromocriptine	No	Yes	NA	
Bumetanide	Liquid available	Yes (Tablets will disperse within 5-10 minutes) (Do not crush Burinex K or A)	NI	
Carbamazepine	Liquid available (Suppositories also available, 125mgpr = 100mg po. Suppositories should be used tds-qds. Eg 200mg bd po = 125mg qds pr. Rectal route is only licensed for 7 days.	Yes (not mr tablets)	NA	Dilute syrup with water. Stop feed for 2 hours before and after carbamazepine administration. Monitor carbamazepine levels. Use suppositories. Jejunal administration not recommended because it may cause plasma levels to decrease
Cabergoline	No	Yes	NA	
Calciferol	No	Yes	NA	Stop feed 1 hour before and after administration

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Calcium	Dissolvable tablets available	NI	NA	NI
Calcium resonium	Granules available (solution can also be given rectally)	NI	NA	Stop feed prior to administration. Flush tube before and after.
Captopril	No	Yes (tablets will disperse in 5 minutes)	NA	
Carbimazole	Roche can make a suspension	Yes (crush and disperse tablets, particles may remain making it unsuitable for tube administration)	NA	
Carvedilol	No	Yes		
Cefaclor	Suspension available	No do not crush MR tablets		
Cetirizine	Solution available	NI	NA	
Chloral hydrate	Elixir available	NI	NA	
Chloramphenicol	No	Yes (Disperse contents of capsules)	NI	
Chlordiazepoxide	No	Yes (Disperse contents of capsules)	NA	
Clomethiazole	Syrup available	NI	NI	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Chlorphenamine	Solution available	NI	NI	NI
Chlorpromazine	Solution available	Yes	NI	
Ciclosporin	Solution available (check if dosage conversion is needed with pharmacist)	NI	NI	
Cinnarizine	No	Yes (Tablet will disperse in water in >2 minutes)	NI	
Ciprofloxacin	Suspension availalbe	Yes (Tablets will disperse in 5 minutes) (light sensitive therefore use immediately)	NI	Feed may decrease absorption by 25%. Stop feed 1 hour before and for 2 hours after administration. Use sterile water not tap water to avoid ion chelation.
Citalopram	Liquid available (4 drops (8mg) liquid may be considered to be equivalent to 10mg tablet)	Yes	NA	
Clobazam	No	Yes	NA	
Clonazepam	No	Yes (tablets will disperse in 5 minutes)	Dilute with 1ml water for injections.	**Dilute with 30-60ml to reduce binding to tubing???**
Clonidine	No	Yes (Catapress will disperse in <2 minutes) (Dixarit will disperse in >2 minutes)	Reconstituted Catapress injections should be diluted with 30-60ml od water before administering	
Clopidogrel	No	Tablets are crushable	NA	
Co-amilofruse	Amiloride and Furosemide liquids available separately	Amiloride is not dispersible	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Co-amoxiclav	Syrup and dispersible tablets available	NI	NI	Dilute syrup to half strength to avoid caking
Co-beneldopa	Dispersible tablets available	NI	NA	
Co-careldopa	No	Yes (tablets will disperse in 5 minutes) Do not disperse SR versions	NA	
Co-codamol	Dispersible tablets available	Yes (30/500mg strength)	NA	
Codeine phosphate	Syrup available	Yes	NI	
Co-dydramol	No	Yes (tablets will disperse in 5 minutes)	NA	
Co-proxamol	No	Crush and disperse tablets	NA	
Co-danthramer	Suspension available	NI	NA	
Co-trimoxazole	Suspension available	Yes	NI	
Cyclizine	No	Yes	Yes	
Cyclophosphamide	No	NI	Yes	
Cyproterone	No	Crush and disperse tablets	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Demeclocyline	No	Yes	NA	
Dexamethasone	Solution available	Yes	Yes	
Diazepam	Syrup available	Yes	NI	Adsorbed into plastic tubing, to avoid this dilute with 30-60ml water. Use rectal tubes or injection or lorazepam sublingually.
Diclofenac	Dispersible tablets available	Do not crush mr, sr or ec preparations	NI	
Digoxin	Yes (62.5mcg tablet equivalent to 50mcg liquid = 1ml)	Yes	NI	Absorption may be affected by enteral feed. Plasma monitoring advised.
Dihydrocodeine	Yes	NI	Martindale- excipients are ok, no reason not to give.	
Diltiazem	No	Capsules can be opened but do not crush the contents. Total daily dose can be converted to diltiazem tablets three times daily, which can be crushed and dispersed in water.	NA	
Dipyridamole	Yes	SR capsules can be opened but do not crush the contents	Yes, dilute the reconstituted injection with 30-60ml of water before administering.	
Disopyramide	No	Capsule contents can be dispersed in water	Yes. Strong taste hence dilute with orange juice, (No bioavailability date)	
Docusate	Yes	NI	NI	
Domperidone	Yes	Yes	NA	
Dosulepin	Rosemont (special)	Capsules can be opened. Tablets can be crushed	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Doxazosin	No	Non Sr tablets can be crushed and will disperse in 10 minutes	NA	
Doxycycline	Dispersible tablets available	The contents of capsules can be dispersed but caution the contents of the capsules can be irritant to the mouth.	NA	
Efavirenz	Solution available	NI	NA	
Enalapril	No	Tablets are crushable and will disperse within 10 minutes but with vigorous agitation.	NI	
Entacapone	No	Not advisable	NA	
Erythromycin	Suspension available	NI	NI	
Etoposide	No	NI	Yes CAUTION cytotoxic. Dilute well.	
Ferrous Sulphate	No. (change to ferrous fumarate liquid)			
Finasteride	No	Yes (caution wear gloves, mask, crush in a well ventilated room. Not to be handled by child bearing females	NA	
Flecanide	No	Yes (tablet will disperse within 5 minutes)	Yes (mix with water for injections)	
Flucloxacillin	Suspension available	NI	NI	Stop feed for one hour before and after administration
Fluconazole	Suspension available	Pfizer- capsules can be opened but recommend the use of suspension	NI	
Flucytosine	No	NA	Yes	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Fludrocortisone	No	Yes (tablets will disperse within 5 minutes)	NA	
Fluoxetine	Liquid available	NI	NI	
Folic acid	Syrup available	Will suspend in water but not disperse.	NI	
Furosemide	Solution available	Yes tablets will disperse within 5 minutes)	NI	
Gabapentin	No	Capsule contents will disperse in water	NA	
Glibenclamide	No	Yes (tablets will disperse in 10 minutes)	NA	
Gliclazide	No	Yes (Tablets will disperse within 12 minutes with some agitation)	NA	
Haloperidol	Liquid available	Capsule contents disperse in water	NI	
Hydralazine	No	Yes (tablets will disperse within 10 minutes with some agitation)	Yes –reconstitute with 1ml water for injection	
Hydrocortisone	No	Yes (tablets will disperse within 5 minutes)	Yes	
Hydroxychloroquine	No	Yes (crush and disperse tablets)	NA	
Hyoscine –N-Butylbromide	No	NI	Yes	
Hyoscine hydrobromide	No	NI	Yes	
Ibuprofen	Suspension available	NI	NA	
Imipramine	No	Yes	NI	
Isoniazid	Elixir available	NI	NA	Stop feed half an hour before and 2 hours after drug administration

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Isosorbide mononitrate	No	Yes (tablets will disperse within 11 minutes with some agitation) Do not crush MR preparations	NA	
Itraconazole	Liquid available	NI	NI	
Labetalol	No	NI	Yes mix with squash	
Lamivudine	Solution available	NI	NI	
Lamotrigine	Dispersible tablets available	Yes but unstable in aqueous solution therefore use immediately	NA	
Lansoprazole	Orodispersible tablets available	NI	NA	
Levomepromazine	No	Yes	NI	
Levothyroxine	No (liothyronine injection available 20mcg = 100mcg levothyroxine tablets	Tablets can be crushed	NA	
Lithium carbonate	No (Lithium citrate syrup exists dosage conversion 200mg lithium carbonate= 509mg lithium citrate)	Tablets should not be crushed as they are slow release	NA	
Lofepramine	Suspension available	Yes	NA	
Loperamide	Syrup available	NI	NA	
Lorazapam	No	Yes (tablets will disperse within 5 minutes)	Yes	
Losartan	No	Yes (Crush and disperse in water, can take a long time to dissolve and leaves a large sediment)	NA	
Mebeverine	Liquid available	NI	NA	
Medroxyprogesterone	No	Yes	Yes	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Mefenamic acid	No	Tablets will not disperse well. Capsules can be opened and mixed with a small amount of water and given.	NA	
Megestrol	No	Yes	NI	
Mesalazine	Granules available	Pentasa will disperse in water	NA	
Mesna	No	NI	Yes- mix with a soft drink and take immediately.	
Metformin	No	Yes (Crush and disperse tablets)	NA	
Methadone	Solution available			
Methotrexate	No	NI	Yes Caution cytotoxic	
Methylprednisolone acetate	No	NI	Soluble formulations only, not suspension. Mix with fruit squash/ juice to disguise taste.	
Metoclopramide	Syrup available	NI	Yes	
Metolazone	No	Yes although caution from Hoeschst (Borg) bioavailability of Metolazone tablets will increase when crushed	NA	
Metoprolol	No	Yes	Yes	
Methyldopa	No	Yes	NI	
Metronidazole	Suspension available	Tablets can be crushed but flush with plenty of water to avoid irritation	Yes	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Midazolam	No	NA	Yes	
Morphine sulphate	Solution available	Zomorph capsules can be opened and the contents flushed down. Do not crush the granules	NI	
Multivitamins	Abidec drops Ketovite liquid		Pabrinex	
Neostigmine	No	NI	Yes requires taste masking. Maintenance of stability cannot be guaranteed when preparation is diluted.	
Nicorandil	No	Yes	NA	
Nifedipine	No	Can draw liquid out of capsules, use immediately as light sensitive.		
Nimodipine	No	Tablets can be crushed but are light sensitive therefore must be taken immediately.	NA	
Nitrazepam	Yes	Yes	NA	
Nitrofurantoin	Suspension available	NI	NA	
Norethisterone	No	Searle tablets can be crushed and dispersed in water.	NA	
Olanzapine	Orodispersible tablets available	Tablets will not dissolve but will form a suspension	NI	
Omeprazole	No	Tablets or the contents of the capsule can be dissolved in 8.4% sodium bicarbonate or water		
Ondansetron	Syrup available	Yes	Yes	
Orphenadrine	Elixir available	NI	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Oxybutynin	Elixir available	NI	NA	
Oxycodone	Solution availabel	NI	NA	
Paracetamol	Suspension and soluble tablets available	NI	NI	
Paroxetine	Liquid available	Yes	NA	
Penicillamine	No	Yes crush or disperse tablets		
Penicillin VK	Suspension available	NI	NA	Stop feed 1 hour before and 2 hours after administration
Pergolide	No	Lilly, will disintegrate in 2 teaspoons of water but will not dissolve.	NA	
Perindopril	No	Yes (tablets will disperse within 5 minutes)	NA	
Pethidine	No	NI	Yes. Dilute with water for injections. Stability can not be guaranteed when the preparation is diluted.	
Phenobarbital	Elixir available	Cox- can crush but dose sensitive therefore ensure the whole dose is taken	NI	
Phenytoin	Suspension available (90mg = 15ml suspension is equivalent to 100mg capsule)	Open capsules and sprinkle on food	NI	Change to a once daily dose. Stop feed for 2 hours before and after drug administration. Dilute with equal parts of water. Flush tube before and after administration. Monitor levels.
Phytomenadione	No	Yes takes 5 minutes	Yes Konakion MM paediatric	
Prednisolone	Soluble tablets available	Do not crush ec tablets	NI	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Probenecid	No	Yes (Crush and disperse tablets)	NI	
Procainamide	No	NA	Yes	
Prochlorperazine	Syrup available	Yes (Tablets will disperse within 10 minutes)	NI	
Procyclidine	Syrup available	Yes (tablets will disperse within 5 minutes)	NA	
Promethazine	Elixir available	NI	NA	
Propranolol	Solution available	Yes. (Crush and disperse in water) Do not open/ crush MR preparations	NA	
Pyrazinamide	No	NI	NA	Stop feed half an hour before and 1 hour after drug administration
Pyridostigmine	No	ICN recommend it is made into a suspension	NA	
Pyridoxine	No	Yes (Crush and disperse tablets in water)	NI	
Quinine Sulphate	No	Yes but flush with plenty of water	Quinine dihydrochloride- not recommended but could be possible	
Ramipril	No	Yes	NA	
Ranitidine	Syrup and dispersible tablets available	NI	NI	
Rifampicin	Suspension available	NI	NI	Stop feed half an hour before and restart 2 hours after administration.
Risperidone	Liquid available	Tablets are crushable	NI	
Rofecoxib	Suspension available	NI	NA	
Ropinirole	No	Yes	NA	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Selegiline	Liquid available	Yes (tablets will disperse within 12 minutes)	NA	
Senna	Syrup available	Yes	NA	
Sertraline	No	Yes	NA	
Simvastatin	No	Yes (tablets will disperse within 11 minutes)	NA	
Sirolimus	Solution available			
Sodium fusidate	Suspension availalbe (Sodium fusidate tablets 500mg = 750mg oral suspension)	Tablets can be crushed (caution coating can block tube)	NI	
Sodium valproate	Syrup available	NI	NI	
Sotalol	No	Yes (tablets will disperse within 10 minutes)	NI	
Spironolactone	Solution available(named patient)	Yes	NA	
Sucralfate	Suspension available(caution may block tubes)	Tablets can be crushed	NA	Stop feed 1 hour before and restart 1 hour after administration. Consider using ranitidine.
Sulphasalazine	Suspension available	No	NA	
Sulpiride	No	Yes Tablets will disperse within 5 minutes)		
Tamoxifen	Solution available	NI	NA	
Temazepam	Solution available	NI	NI	
Theophylline	Yes use liquid . Same total dose but in 3 or 4 divided doses. Monitor levels 2 days after changing to syrup.	No	NA	Stop feed 1 hour before and restart 2 hours after administration. Monitor levels 2 days after starting to administer theophylline via tubes.

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, dissolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Thiamine	No	Roche – crushing not recommended but has been done. Disperses slowly.	NA	
Thioridazine	Solution available	Yes	NA	Avoid if possible as causes coagulation with feed. Dilute well and flush with 30-60ml of water to minimise contact.
Tolbutamide	No	Tablets leave large lumps therefore not suitable for tube administration.		
Topiramate	No	Crush and disperse in water		
Tramadol	Dispersible tablets available	Can open capsules and mix with food or drink	NI	
Tranexamic acid	No	NI	Yes	
Trazadone	Liquid available	Yes	NA	
Trifluoperazine	Solution available	Yes (tablets will disperse within 10 minutes)	NA	
Trihexyphenidyl	Syrup available	NI	NI	
Trimethoprim	Suspension available	Yes	NI	
Ursodeoxycholic acid	Suspension available	Yes	NI	
Vancomycin	No	NI	Yes , reconstituted with 30ml of water.	
Venlafaxine	No	Disperse in water without crushing, administer immediately and flush well. MR capsules can be opened and the contents tipped down large bore tubes, do not crush the contents though.		
Verapamil	Solution available	Yes (Tablets will disperse in about 11-12 minutes)	Yes	

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Drug	Solution/ licensed dispersible tablet available	Tablet not specifically licensed as soluble in water, disolvable or crushable?	Injection possible to be given orally?	Drug /Feed Interactions
Vitamin B compound strong	No	NI	NA	
Warfarin	No	Yes (tablets will disperse within 5 minutes)	NA	May be antagonised by vitamin K in feeds. Stop feed 1 hour before and restart 1-2 hours after administration. Monitor INR.
Zinc	Effervescent tablets available	NI	NA	
Zidovudine	Solution available	NI	NI	
Zopiclone	No	Yes	NA	

Key
NI = No information
NA = Not available

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Administering Drugs via Enteral Feeding Tubes. A Practical Guide. Produced by the British Association for Parenteral and Enteral Nutrition. www. Bapen.org.uk. and the British Pharmaceutical Nutrition Group.

Evidence Base

The majority of the recommendations made in this guideline are based on anecdotal experiences, practical or theoretical considerations or anecdotal evidence in literature. Every effort has been made to ensure the information contained in this guideline is correct, but no liability can be accepted for any inaccuracies or mis-statements of fact contained herein. Please use the guidance with these comments in mind, and only apply where the clinical situation makes it necessary.

Helen McHale, manages this guideline
See Trust Policy for the Production of Drug Therapy Guidelines
Approved by: Date:
Ratified by: Date:
Review date:

Portsmouth and South East Hampshire
Guidelines and Medicines Management
Committee

NHS

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Personal Information

Name:-
Type of Feed:-
Rate:-
Additional fluids

Medication Details

Name	Dose	Times/day	Formulation	Special Instructions

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How Do I Take My Medicines?	Types of Medicines	Additional Information
If you can still swallow your medicines, you should take them this way. If you need to give your medicines via your feeding tube, you should follow these instructions. 1. Switch off the feed if it is running. 2. Flush the tube with _____ml of tap water. 3. Prepare your medicine as instructed e.g. crush tablet and disperse in water (this should be done one medicine at a time, unless you have been told otherwise). 4. Give medicine down feeding tube. 5. Draw up 10ml of water into the same syringe and flush down feeding tube. 6. Repeat from step 3 if giving more than one medicine. 7. Finally flush tube with _____ml of water. 8. Restart feed if necessary. You may need to allow some time for the medicine to work: See the special instructions section on your medicines chart.	**Tablets** **Immediate release tables -** these are 'ordinary' tablets, sometimes they can be sugar or film coated. Some of these tablets will disperse if left in water. **Soluble tablets** - these tablets dissolve completely to leave a clear or coloured solution. **Dispersible tablets** - these tablets break down to a fine powder when put in water. **Special release** - these tablets can be called slow release, modified release or enteric coated and usually have the letters XL, LA, SR, MR EC or CR in the name. These should NOT be crushed and are not suitable for use via a feeding tube. **Methods of crushing tablets** You should only crush tablets to put down your feeding tube if your pharmacist or nutrition nurse has told you it is OK to do so. Tablets can be crushed in a pestle and mortar. There are also some special devices that can be used for crushing tablets. **Capsules** Most capsules have a gelatin shell with loose powder inside that can be mixed with water. Some contain granules and others are soft capsules filled with liquid. Advice should be sought before giving these via your feeding tube. **Liquids** Liquid medicines can be solutions, syrups or suspensions. Some liquid medicines are very thick and you may be told to mix them with water before putting them down the tube. This should be done just before giving the dose.	**Giving sets / water bottles** Throw away after 24hrs. **Syringes/adapters** You can use for up to 1 week. Clean in washing up liquid and warm water. Rinse with cold tap water. Allow to air dry. Store in a designated container with a lid i.e. sandwich box. **Department of Clinical Nutrition** Queen Alexandra Hospital Tel: 023 9228 6000 ext 5918 Bleep 1484 /1813 Jackie Collett - Nurse Specialist Nutrition Joanne Pratt - Nutrition Nurse Selena Rogers - Nutrition Nurse Gillian Sharples - Nutrition Nurse Laura Smith - Nutrition Nurse