LOADING DOSES FOR MEDICATION GUIDELINE

GUIDELINE FOR THE PREVENTION OF FATALITIES

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Author/Lead Job Title	Alberto Ortiz-Moya (Principal pharmacist)
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CHANGE RECORD

Version	Date	Change details
1.00	6/8/12	*Publisher document rewritten into guideline format*
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1. INTRODUCTION

A loading dose is an initial large dose of a medicine used to ensure a quick therapeutic response. It is usually given for a short period before therapy continues with a lower maintenance dose. The use of loading doses of medicines can be complex and error prone. Incorrect use of loading doses or subsequent maintenance regimens may lead to severe harm or death.

The National Patient Safety Agency (NPSA) issued a Rapid Response Report (NPSA/2010/RRR018) on 25 November 2010 with recommended actions aimed to reduce the number and severity of medication incidents involving incorrect prescribing or administration of loading doses and subsequent maintenance doses.

These actions included the production of a list of critical medicines appropriate for the organisation, where incorrect loading doses or subsequent maintenance doses are likely to cause harm and ensuring healthcare professionals are aware of when to challenge abnormal doses of these medicines.

This guidance has been developed as a response to these recommended actions.

2. SCOPE

This guidance is aimed at all staff employed by Humber NHS Foundation Trust (HFT) who have dealings with medicines, this includes staff who are seconded into HFT, staff who are on clinical placement, locums, student nurses, all grades of medical staff, bank staff and agency staff.

3. PROCEDURES

Best practice in prescribing, supply and administration of drugs requiring loading doses:

- Where a loading dose is prescribed or recommended, ensure that details of on-going treatment and titration to maintenance dose are clear, and in line with national or local guidelines.
- Challenge any abnormal prescribing or treatment recommendations.
- Where a change in dose has been prescribed or recommended, check this with patient (or patient's representative), if appropriate.
- Contact Prescriber or Specialist recommending treatment with any concerns.
- Document any actions taken and information received.

Agreed critical list of drugs most likely to cause harm as a result of incorrect prescribing or administration of loading dose or subsequent maintenance dose and medicines that should be considered to prevent fatalities from medication loading doses in HFT are warfarin, digoxin, amiodarone, and phenytoin.

STANDARD DOSES FOR MEDICINES ON THE HFT CRITICAL LIST

Drug and usual ADULT oral dose	When to query/challenge a dose within HFT
Warfarin Loading dose (specialist use only): Day 1 to 3 usually 10mg, 10mg, 5mg OR in over 65 years/other risk factors 5mg, 5mg, 5mg then titrate as per INR. Anticoagulants Maintenance dose: (Dependent on target INR) usually 3mg to 9mg daily. Warfarin doses may vary considerably between patients.	**Challenge any newly initiated doses of 5mg or above (other than Day 1 to 3 schedule).** If 5mg tablets are prescribed – check dose is 8mg or more in yellow anticoagulant book (or with patient). Always check on-going dose and INR results in yellow anticoagulant book (or with patient) and advise patient of signs of adverse effects.
Digoxin Loading dose (rapid digitilisation in secondary care): 0.75mg to 1.5 mg over 24 hours in divided doses. Maintenance dose: 62.5micrograms to 250 micrograms daily **Reduced in elderly to usual max 125 micrograms daily.**	**Challenge doses above 250 micrograms daily or above 125 micrograms in patients over 70 years.** Check previous dose and confirm any changes with prescriber and/or patient
Amiodarone Loading dose (initiate only in secondary care): 200mg tds for 1 week, then 200mg bd for 1 week. Maintenance dose: 100mg to 200mg daily.	**Challenge any regular dose above 200mg daily.** Any regular dose above 200mg daily should be confirmed with Cardiology and documented in patient's notes.
Phenytoin Loading dose (iv only in secondary care): Initial oral dose*: 150mg to 300mg daily increased gradually (with plasma level monitoring) to Maintenance dose*: 200mg to 500mg daily. There may be wide inter-patient variability in phenytoin serum levels with equivalent dosage, so a wide range of doses is used. * If phenytoin suspension is administered a dose adjustment is required due to differences in bioavailability between the suspension and solid dosage forms– consult BNF	**Challenge any dose above 500mg daily or any change in dose, especially a change greater than 50mg daily.** Check previous dose and confirm changes with patient or specialist prescriber.

4. REFERENCES/DEFINITIONS

National Patient Safety Agency, Rapid Response Report, NPSA/2010/RRR018.
Hull and East Riding Prescribing Committee.