

This applies to adult patients only

Loading Dose Worksheet for Intravenous Digoxin

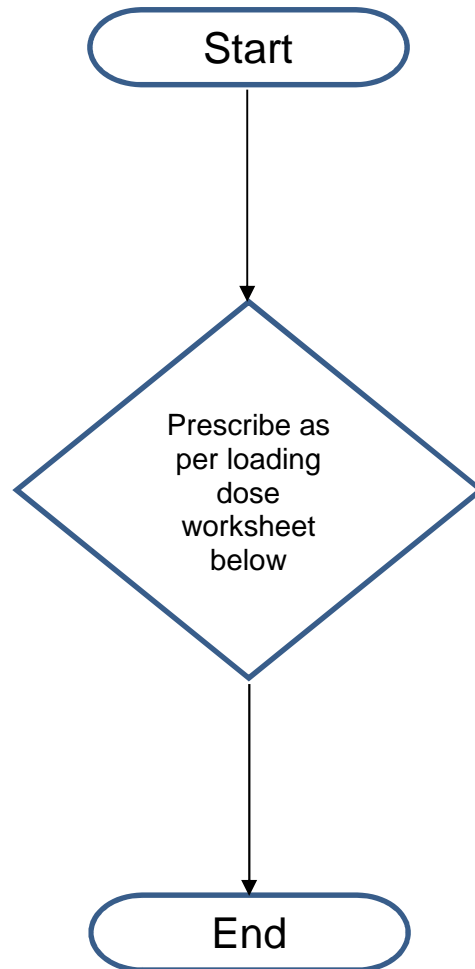
Key:

General Notes

GP/SWASFT

ED/MAU/SRU/Acute GP/Amb-Care

In-patient wards



1. Aim/Purpose of this Guideline

1.1. This loading dose worksheet is intended to guide medical, nursing and pharmacy staff in the safe and appropriate prescription and administration of intravenous digoxin loading doses in adults

2. The Guidance

2.1. See the next page(s)

Loading dose worksheet for IV Digoxin

Administration

Dose

- 500mcg - 1000mcg (0.5mg—1mg) in 100mL of diluent, as a single dose, over 2 hours, via a volumetric infusion pump.

Diluent

- Glucose 5% or sodium chloride 0.9%.

Other considerations

- Loading with intravenous digoxin should **not** be used in patients who have had a cardiac glycoside in the preceding two weeks.
- Consider a reduced dose in the elderly, in renal impairment, or in low lean body mass.

Example Prescription

POE - Prescriber Order Entry [MR IAN NICHOLLS] PHM JAC

DUMMY TEST TEST DUMMY TEST Retain Ward Patient Assessment

Consultant: DR TOBY J SLADE Ward: BOTOX WARD (ZCO)

Hospital No. 123456 Nat. No. Date of Birth 15-Feb-1975 Age 39 yrs Height cm Weight 70.000 kg BSA sq m

Allergies: Clostridium tetani vaccine, DIPEPTIDYL-PEPTIDASE-4 INHIBITORS

Active Medications Discontinued Medications

Status	Drug Name	Dose	Frequency	Route	Start Date/Time	Stop Date/Time	BNF
	Regular Medications						
R	DIGOXIN 500 micrograms in 2mL Injection	1000 microgram	STAT	intravenous	29-Apr-2014 17:00		Cardiovascular

Monitoring

- Monitor heart rate, blood pressure and consider ECG.
- Periodically assess serum electrolytes and renal function: risk of digitalis toxicity is increased by hypokalaemia, hypercalcaemia, hypomagnesaemia and renal impairment.
- Avoid rapid intravenous administration (risk of hypertension and reduced coronary flow).
- If plasma-digoxin levels required (such as in renal impairment), blood should be taken at least 6 hours after a dose.
- Target therapeutic plasma-digoxin level = 0.5 - 2.0mcg/L.
- Common adverse effects include nausea, vomiting, rash, diarrhoea, blurred vision, conduction disturbances, dizziness, yellow vision and arrhythmias.

Follow up prescription for maintenance dose

To commence the **following day**:

- 62.5mcg - 250mcg once daily, as the oral **tablet** OR
- 50mcg - 200mcg once daily, as the oral **liquid**.

Please note: the digoxin oral liquid has greater bioavailability than the tablet form. Commonly: **50mcg of liquid is equivalent to a 62.5mcg tablet.**

Disclaimer: This worksheet is a guideline—there may be other safe ways of prescribing and administering this drug

3. Monitoring compliance and effectiveness

Element to be monitored	Compliance with prescribing and administration in accordance with this guideline (or other safe practice).
Lead	Medications Safety Pharmacist.
Tool	No specific tool. Datix will be used to identify clinical incidents.
Frequency	As required according to clinical incident reports.
Reporting arrangements	Via Medicines Practice Committee. Clinical incidents on Datix will be reported to the senior nurse/manager in that area and will also be reported to the Medication Safety Group.
Acting on recommendations and Lead(s)	Actions from incident reports will be at a local level and may also result in broader actions, co-ordinated by the Medication Safety Group. Matrons/ward managers
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within the time frame specified in the action plan.

4. Equality and Diversity

4.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the ['Equality, Diversity & Human Rights Policy'](#) or the [Equality and Diversity website](#).

4.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.

Appendix 1. Governance Information

Document Title	Loading Dose Worksheet for Intravenous Digoxin.			
Date Issued/Approved:	November 2017			
Date Valid From:	November 2017			
Date Valid To:	November 2020			
Directorate / Department responsible (author/owner):	Bronwin Staple, Medicines Information Lisa Thomas, Medicines Information Ann Cardell, Medication Safety			
Contact details:	01872 252587			
Brief summary of contents	Guidance on the prescribing and administration of digoxin in adults.			
Suggested Keywords:	'Digoxin', 'Loading Dose', 'Arrhythmia'.			
Target Audience	RCHT	PCH	CFT	KCCG
	✓			
Executive Director responsible for Policy:	Chief Pharmacist.			
Date revised:	October 2017			
This document replaces (exact title of previous version):	Clinical Guideline for Digoxin IV in Adults – Loading Dose Worksheet.			
Approval route (names of committees)/consultation:	Medication Practice Committee.			
Divisional Manager confirming approval processes	<i>Head of relevant Division.</i>			
Name and Post Title of additional signatories	Not required.			
Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings	{Original Copy Signed}			
	Name:			
Signature of Executive Director giving approval	{Original Copy Signed}			
Publication Location (refer to Policy on Policies – Approvals and Ratification):	Internet & Intranet		Intranet Only	✓

Document Library Folder/Sub Folder	Clinical / Pharmacy
Links to key external standards	None
Related Documents:	N/A
Training Need Identified?	N/A

Version Control Table

Date	Version No	Summary of Changes	Changes Made by (Name and Job Title)
October 2011	V1.0	Initial Issue.	Ian Nicholls, Medication Safety Pharmacist
October 2012	V2.0	Clinical update.	Ian Nicholls, Medication Safety Pharmacist
August 2014	V3.0	Update to include EPMA changes and review practice.	Ian Nicholls, EPMA and governance Pharmacist
October 2017	V4.0	Clinical update.	Lisa Thomas, Medicines Information Pharmacist; Bronwin Staple, Medicines Information Lead Pharmacist.

All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

Controlled Document

This document has been created following the Royal Cornwall Hospitals NHS Trust Policy on Document Production. It should not be altered in any way without the express permission of the author or their Line Manager.

Appendix 2. Initial Equality Impact Assessment Form

Name of the strategy / policy /proposal / service function to be assessed (hereafter referred to as <i>policy</i>) (Provide brief description): Loading Dose Worksheet for Intravenous Digoxin.	
Directorate and service area: All clinical areas	Is this a new or existing Policy? Existing.
Name of individual completing assessment: Lisa Thomas	Telephone: 01872 252587
1. Policy Aim* Who is the strategy / policy / proposal / service function aimed at?	This loading dose worksheet is intended to guide medical, nursing and pharmacy staff in the safe and appropriate prescribing and administration of intravenous digoxin loading doses in adults.
2. Policy Objectives*	To ensure RCHT complies with the requirements of the NPSA RRR018: <i>Preventing fatalities from medication loading doses.</i>
3. Policy – intended Outcomes*	Reduction in the risk associated with the prescribing and administration of intravenous digoxin loading doses in adults.
4. *How will you measure the outcome?	Review of Clinical Incident Reports.
5. Who is intended to benefit from the policy?	All adult inpatients within the Trust.
6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy? b) If yes, have these *groups been consulted? C). Please list any groups who have been consulted about this procedure.	No. Medications Safety Group.

7. The Impact			
Please complete the following table.			
Are there concerns that the policy could have differential impact on:			
Equality Strands:	Yes	No	Rationale for Assessment / Existing Evidence
Age		✓	Policy for all patients
Sex (male, female, trans-gender / gender reassignment)		✓	Policy for all patients
Race / Ethnic communities /groups		✓	Policy for all patients

Disability - Learning disability, physical disability, sensory impairment and mental health problems		✓	Policy for all patients
Religion / other beliefs		✓	Policy for all patients
Marriage and civil partnership		✓	Policy for all patients
Pregnancy and maternity		✓	Policy for all patients
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		✓	Policy for all patients
<p>You will need to continue to a full Equality Impact Assessment if the following have been highlighted:</p> <ul style="list-style-type: none"> • You have ticked "Yes" in any column above and • No consultation or evidence of there being consultation- this <u>excludes</u> any <i>policies</i> which have been identified as not requiring consultation. or • Major service redesign or development 			
8. Please indicate if a full equality analysis is recommended.		Yes	No ✓
9. If you are not recommending a Full Impact assessment please explain why.			
It is not required as the guideline does not have a differential impact on any group.			
Signature of policy developer / lead manager / director		Date of completion and submission November 2017	
Names and signatures of members carrying out the Screening Assessment	1. Lisa Thomas 2. Bronwin Staple		

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa,
Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust's web site.

Signed _____

Date _____