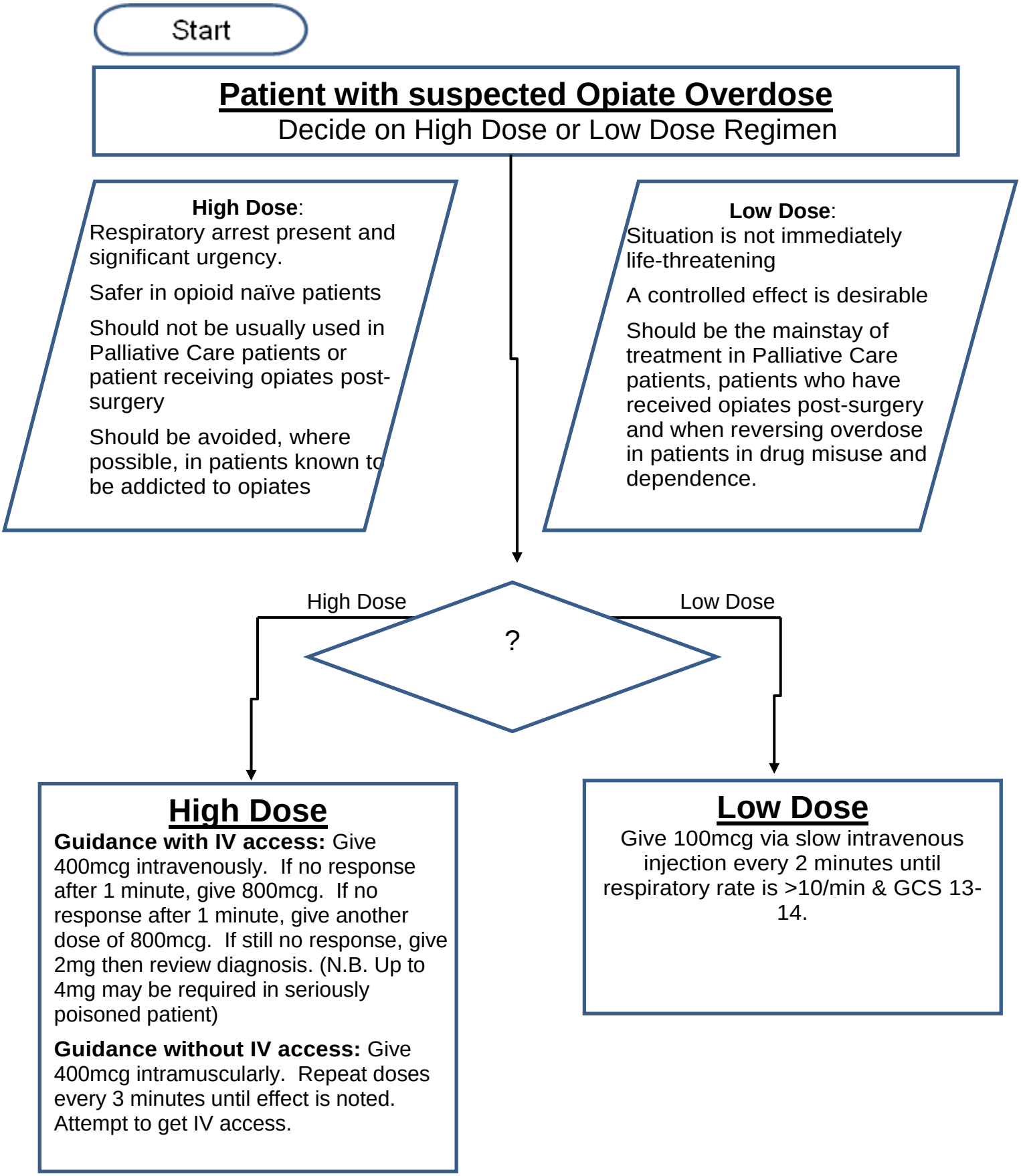
CLINICAL GUIDELINE FOR THE USE OF NALOXONE Summary.



1. Aim/Purpose of this Guideline

1.1. This guideline aims to outline how to use Naloxone to reverse opiate or suspected opiate toxicity safely using appropriate dosing without precipitating undesirable adverse reactions such as acute withdrawal syndrome.

2. The Guidance

2.1. The use of Naloxone should only be considered if there is an immediate threat to life or a diagnosis of respiratory depression, regardless of the cause of opiate exposure.

2.1.1. Respiratory Depression can be defined as:

- Respiratory rate <8/min (measures for a full minute)
- O_2 SATS <90% on air
- Decreased conscious level

2.2. The primary aim of treatment is to reverse the toxic effects of opiates such that patients are no longer at risk of respiratory arrest, airway loss, or other opioid-related complications. The primary aim of treatment should not be to restore a normal level of consciousness, and indeed in some circumstances restoring a normal level of consciousness is entirely inappropriate

2.3. The rapidity of reversal depends on patient condition. Care must be taken in those who are opioid dependent, as rapid or complete reversal may induce a withdrawal state. This can cause patient harm, and make further management difficult

2.4. **High Dose vs. Low dose regimens – which to choose?**

2.4.2. **High Dose Regimen:**

- Should only be used where there is respiratory arrest and significant urgency.
- Is safer in opioid naïve patients
- Should not be usually used in Palliative Care patients or patient receiving opiates post-surgery
- Should be avoided, where possible, in patients known to be addicted to opiates

2.4.3. **Low Dose Regimen:**

- Should be used where the situation is less immediately life-threatening
- Should be used where a controlled effect is desirable
- Should be the mainstay of treatment in Palliative Care patients, patients who have received opiates post-surgery and when reversing overdose in patients in drug misuse and dependence.

2.5. There are 2 main strategies when giving Naloxone – ‘higher initial dose regimens’ and ‘lower initial dose regimens’

2.5.4. **Higher initial dose regimens** - where there is respiratory arrest and significant urgency where there is a need to achieve a pronounced and instant reversal

Guidance with IV access: Give 400mcg intravenously. If no response after 1 minute, give 800mcg. If no response after 1 minute, give another dose of 800mcg. If still no response, give 2mg then review diagnosis. (N.B. Up to 4mg may be required in seriously poisoned patient)

Guidance without IV access: Give 400mcg intramuscularly. Repeat doses every 3 minutes until effect is noted. Attempt to get IV access.

2.5.5. **Lower initial dose regimens** - where the situation is less immediately life threatening or where a more controlled effect is desirable.

Guidance: Give 100mcg via slow intravenous injection every 2 minutes until respiratory rate is >10/min & GCS 13-14.

2.6. **Continuous naloxone infusions** may be required in patients who deteriorate after initial dosing. This is a result of Naloxone's short effective half-life compared to many opiates that it may be reversing.

Guidance: Make up an infusion of 2mg Naloxone (=5 x Naloxone 400mcg/1ml ampoules/syringes) in 500ml of NaCl 0.9% or Dextrose 5%.

Start infusion at 60% of dose required for resuscitation (see table) over 1st hour and titrate to effect

Resuscitation dose (mcg)	Initial dose over 1 hour (mcg)	Initial Infusion rate (ml/hr)
100	60	15
200	120	30
300	180	45
400	240	60
500	300	75
600	360	90
700	420	105
800	480	120
900	540	135
1000	600	150
1100	660	165
1200	720	180
1300	780	195
1400	840	210
1500	900	225
1600	960	240
1700	1020	255
1800	1080	270
1900	1140	285
2000	1200	300
2100	1260	315
2200	1320	330
2300	1380	345
2400	1440	360
2500	1500	375

3. Monitoring compliance and effectiveness

Element to be monitored	Compliance with the clinical guideline
Lead	Medication Safety Pharmacist
Tool	Periodic Clinical Audit, Incident Reports
Frequency	When Incident reports are received Yearly otherwise
Reporting arrangements	The completed report be sent to the Medication Safety Group for Review
Acting on recommendations and Lead(s)	The Medication Safety Group will report any necessary actions to the Medicines Practice Committee
Change in practice and lessons to be shared	Required changes to practice will be identified and actioned within 3 months. A lead member of the team will be identified to take each change forward where appropriate. Lessons will be shared with all the relevant stakeholders

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	Use of Naloxone in Adults			
Date Issued/Approved:	April 2016			
Date Valid From:	April 2016			
Date Valid To:	April 2016			
Directorate / Department responsible (author/owner):	Ian Nicholls, EPMA & Governance Pharmacist Rob Taylor, Consultant in Emergency Medicine Nicholas Marshall, Consultant Anaesthetist			
Contact details:	01872 25 2217			
Brief summary of contents	This guideline provides guidance on the appropriate dosing and administration of Naloxone			
Suggested Keywords:	Naloxone, Opiate reversal			
Target Audience	RCHT	PCH	CFT	KCCG
	✓			
Executive Director responsible for Policy:	Medical Director			
Date revised:	N/A			
This document replaces (exact title of previous version):	New Document			
Approval route (names of committees)/consultation:	Medicines Practice Committee (04.03.16) CSSC Governance DMB			
Divisional Manager confirming approval processes	Sally Kennedy, Divisional Director CSSC			
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: Janet Gardner, Governance Lead CSSC			

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				
Related Documents:	NHS/PSA/Re/2015/009 NHA Patient Safety Alert - Support to minimise the risk of distress and death from inappropriate doses of naloxone			
Training Need Identified?	No			

Version Control Table

Date	Version No	Summary of Changes	Changes Made by *(Name and Job Title)*
January 2016	V1.0	Initial Issue	Ian Nicholls, EPMA and Governance 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 guideline: **Use of Naloxone in adults**	
Directorate and service area: **Pharmacy**	Is this a new or existing Policy? **New**
Name of individual completing assessment: **Ian Nicholls**	Telephone: **01872 252217**
1. Guideline Aim* Who is the strategy / policy / proposal / service function aimed at?	The aim of this guideline is to provide information to clinicians and nurses in all areas of the Trust on the safe an appropriate use of Naloxone in a range of clinical circumstances
2. Policy Objectives*	Prevent harm to patients caused by incorrect use of Naloxone
3. Policy – intended Outcomes*	No patient harm
4. *How will you measure the outcome?	By monitoring incident reports
5. Who is intended to benefit from the policy?	Patients
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.	Yes yes Emergency Department Clinicians Pain Team Resuscitation 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		✓	

Sex (male, female, trans-gender / gender reassignment)		✓	
Race / Ethnic communities /groups		✓	
Disability - Learning disability, physical disability, sensory impairment and mental health problems		✓	
Religion / **other beliefs**		✓	
Marriage and civil partnership		✓	
Pregnancy and maternity		✓	
Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian		✓	

You will need to continue to a full Equality Impact Assessment if the following have been highlighted:

- You have ticked "Yes" in any column above and
- No consultation or evidence of there being consultation- this excludes any *policies* 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.

This policy applies to all adult patients

Signature of policy developer / lead manager / director 	Date of completion and submission Tuesday, 12 January 2016

Names and signatures of members carrying out the Screening Assessment	1. Ian Nicholls 2.	

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 _____