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Joint Trust Clinical Guideline for Erythropoiesis Stimulating Agent (ESA) Dosing and Administration in Adult Patients with Chronic Kidney Disease (CKD)

For Use in:	The Renal Directorate NNUHFT
By:	Health Care professionals looking after adult patients with renal anaemia
For:	Adult (18 years and above) patients with chronic kidney disease Inclusions: Low-clearance (pre-dialysis) patients (including transplant recipients), patients on haemodialysis, and patients on peritoneal dialysis
Division responsible for document:	Medical Division
Key words:	Erythropoiesis Stimulating Agent (ESA)
Name of document author/s:	Janet Guyton, Anaemia Specialist Nurse (ASN) and Dr Karim, Consultant Nephrologist
Name and job title of document author's Line Manager:	Judy Snelling Divisional Operational Manager and Matron Sarah Trudgill
Supported by:	Dr Althaf (NNUH), Dr MJ Andrews (NNUH), Dr M Todd (NNUH) and Dr R Varma (NNUH), Dr Jean Patrick, Consultant in Renal/Acute medicine (JPUH) Maricel Ronquillo Renal Nurse Practitioner (JPUH)
Approval by	Medicine Management Group Clinical Guidelines Assessment Panel If approved by committee or Governance Lead Chair's Action; tick here ☐
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Ratified by or reported as approved to	Clinical Safety and Effectiveness Sub-Board
To be reviewed before: This document remains current after this date but will be under review	29/11/2024
To be reviewed by:	Dr Karim
Reference and / or Trust Docs ID No:	15394
Version No:	2.1
Compliance links: *(is there any NICE related to guidance)*	NICE Guidelines Chronic Kidney Disease: managing anaemia, NG8 June 2015, UK Renal Association 5th Edition, 2009-2012 Final Version (15.11.10), European Best Practice Guidelines 2004 Kidney Disease Outcome Quality Initiative 2006/2007
If Yes - does the strategy/policy deviate from the recommendations of NICE? If so why?	Yes - the only deviation is NNUH bloods are taken 6 weekly rather than 4 weekly

This guideline has been approved by the Trust's Clinical Guidelines Assessment Panel as an aid to the diagnosis and management of relevant patients and clinical circumstances. Not every patient or situation fits neatly into a standard guideline scenario and the guideline must be interpreted and applied in practice in the light of prevailing clinical circumstances, the diagnostic and treatment options available and the professional judgement, knowledge and expertise of relevant clinicians. It is advised that the rationale for any departure from relevant guidance should be documented in the patient's case notes.

Version and Document Control:

Version Number	Date of Update	Change Description	Author
1	27/06/2018	New document replaces Trust Protocol for ESA for management of Anaemia within the Renal Directorate. ID - 1567 Joint Trust Guideline for the prescription of ESA in patients with CKD within the Renal Directorate. ID – 1319, Care Domain for patients with CKD & renal anaemia on regular HD. ID: 12387	Janet Guyton, Dr Karim
2	Nov 2021	Addition of Appendices	Janet Guyton, Dr Karim
2.1	29/11/2021	Anaemia Algorithm moved from page to 20 page 11 to give a better flow	Janet Guyton

This is a Controlled Document

Printed copies of this document may not be up to date. Please check the hospital intranet for the latest version and destroy all previous versions.

Glossary/definition of terms

ASN	Anaemia specialist nurse
CKD	Chronic kidney disease
ESA	Erythropoiesis stimulating agent
HHD	Hospital haemodialysis
Non-dialysed CKD	Low clearance and transplant patients
PD	Peritoneal dialysis
PRCA	Pure red cell aplasia
SC	Subcutaneously

Rationale

Anaemia is defined as a reduction in the quality or quantity of circulating red blood cells.

There is a morbidity and mortality associated with renal anaemia.

Blood haemoglobin (Hb) concentration serves as the key indicator for anaemia because it can be measured directly and has an international standard.

A major cause of anaemia of chronic kidney disease (CKD) is a reduction in eryrthropoietin production, and a relative resistance to erythropoietin.

This guideline is intended to facilitate and optimise:

- Timely/early referral to the Anaemia Specialist Nurse (ASN)
- Effective use of iron and erythropoiesis stimulating agents (ESAs)
- A reduced requirement for blood transfusion
- An improved quality of life
- A reduction in cardiovascular risk and requirement for hospitalisation

The following management schedules parallel the NICE guideline Chronic Kidney Disease: managing anaemia NG8 2015.

Objectives

To ensure all Healthcare professionals are aware of the best practice for the administration of an ESA to patients with anaemia of CKD.

To know when to seek advice (NMC code of Conduct “Know your Capabilities” 2018: 6.3)

To ensure staff are able to assess patients with anaemia of CKD and deliver the appropriate treatment and are competent to use the patient management pathways described in this document.

To ensure the ASN/Registered nurses are competent to provide safe and effective anaemia management.

Scope

Inclusions:

Low-clearance (pre-dialysis) patients (including transplant recipients), patients on haemodialysis, and patients on peritoneal dialysis

Note: Patient management pathways are different for

- Patients with non-dialysed CKD (low clearance and transplant patients)
- Patients on hospital haemodialysis (HD)
- Patients on home HD
- Patients on peritoneal dialysis (PD).

The differences are clarified in the text

Exclusions:

- Children

Low Clearance Patient Pathway

Initial Referral of Pre-Dialysis/Transplant Patients

The majority of patients will be referred by letter from a clinician to the ASN (usually a copy of the clinic letter).

Rarely, the ASN will be asked to attend the outpatient (OP) area to initiate discussion (see below) and treatment.

The ASN may attend inpatients not formerly known to renal services.

Pre-requisites for ESA therapy

- Satisfactory Fe stores
    - [Ferritin] >200μg/L
    - Transferrin saturation (TSat) >21%
    - Reticulocyte Haemoglobin (Ret-He) 29-35pg
- Satisfactory B12 and serum folate
- Exclusion of other causes of anaemia (haemolysis, gastrointestinal (GIT) blood loss, myeloma/malignancy etc.) as indicated (see *Appendix 1 – ESA Non-Responders*)
- Blood pressure must be adequately controlled <170/<100mmHg

Erythropoiesis stimulating agent initiation

The ASN will make initial contact with the patient. This is usually by phone but may be by letter and it is always followed up in writing (see *Appendix 2 – Standard letter to patient for administration of Darbepoetin*).

The patient is informed of:

- The indication for an ESA
- Potential risks and side-effects
- The possibility that a pre-existing malignancy may be a relative contraindication to ESA therapy
- The monitoring requirements
- ESA administration. Self-administration is the default position but alternatives may be explored (for example family members or Practice/Community Nurses)

The GP is informed in writing that the patient has been commenced on an ESA. Primary Care will be asked for help with monthly blood tests and for assistance with blood pressure (BP) control. (See *Appendix 3 – Pre-dialysis ESA letter to GP*)

The ESA is prescribed by a Consultant/StR within the Renal Directorate.

The ASN generates the ESA Prescription and the Healthcare Registration form (see Appendix 4).

These are sent to hospital pharmacy and thence to Healthcare@Home.

- Patients will receive their ESA via home deliveries from Healthcare@Home
- All patients to have:
  - 4weekly haemoglobin checks at GP/NNUHT
  - 3 monthly [Ferritin], TSat & Ret-He at GP/NNUHT
  - 6 monthly B12 and serum folate levels at GP/NNUHT
  - 1 to 2 monthly Satisfactory blood pressure <170/<100 mmHg *

    *unless otherwise directed by Nephrologist

    Blood results are the responsibility of the ASN
- ESA prescription changes are the responsibility of the ASN and signed by a Consultant/StR
- The GP and Practice/Community nurses will be informed of any changes to treatment (see Appendix 5 – *Darbepoetin* – Aranesp dose update).
- The eMed database is a mandated record of renal unit activity. These data will be maintained by the ASN.

Hospital HD / Home-HD / PD Patient Pathway

Hospital HD, Home HD, and PD patients are monitored in a six-weekly quality assurance cycle.

- Quality control for Hospital-HD is overseen in a Consultant-led weekly meeting.
    - The ASN is responsible for reviewing Hospital-HD patients' interval results.
- Quality control for Home HD and PD is overseen by a Consultant in the outpatients department.
    - The Home Therapies Nursing Staff are responsible for reviewing Home-HD and PD patients' interval results.

Administration

Pre-dialysis patients

The ESA (Darbepoetin®) should be administered subcutaneously (SC) ideally into the lower abdomen or upper part of the leg: these are the best sites for an effective response. The upper arm is an alternative site.

Patients will be taught to self-administer the ESA by the ASN. In rare circumstances, a trained family member or a Practice/Community Nurse may administer therapy. There is no process for hospital-based administration and patients with insufficient community support will be managed with episodic blood transfusions as per usual practise from Primary Care.

Routine BP measurements (Clinic or Primary Care) are sufficient to ensure safe administration.

Dialysis and Home HD patients;

The ESA (Epoetin alfa - Eprex) is administered intravenously during haemodialysis. It can be given at any time during dialysis at the normal blood pump speed for the individual patient.

Home HD patients have Darbepoetin, it is administered IV into the dialysis lines as above and this is delivered with their Fresenius supplies.

Blood pressure should be <170/<100mmHg prior to administration of the ESA unless otherwise agreed by nephrologist.

It is the responsibility of the named nurse to refer to a Clinician if ESA doses are omitted.

PD patients

The ESA (Darbepoetin®) should be administered SC ideally into the lower abdomen or upper part of the leg: these are the best sites for an effective response. The upper arm is an alternative site.

Patients will be taught to self-administer the ESA by the Home-Therapies staff. Their Darbepoetin is delivered with their Fresenius dialysis supplies.

Hb targets for ESA therapy

- ESA therapy is indicated for symptomatic anaemia Hb <110g/L (or asymptomatic anaemia with a Hb <80g/L) with adequate iron stores, B12 & serum folate
- There must be significant renal impairment (eGFR<60mL/min/1.73m^2)
- Other causes of anaemia must be excluded
- The ESA therapy must be prescribed by a Renal Consultant or StR

Dosing

Pre-dialysis and PD patients

- The starting dose of Darbepoetin® is 0.45μg/kg every 2 weeks
- The dosing schedule may range from weekly to four weekly
- The maintenance dose is typically 0.75μg/kg each calendar month
- The dose is reviewed every 4 weeks

Haemodialysis dependant patients

- The starting dose of epoetin alfa - Eprex® is 50 units/Kg/week in divided doses
- The maintenance dose is typically 150-300 units/Kg/weekly in divided doses
- The dose is reviewed every 6 weeks

Adverse Effects

- Influenza like symptoms - rare
- Rash - very rare. Patients should withhold ESA and inform ASN/Doctor
- Hypertension. Normotensive patients occasionally become hypertensive.
    - More commonly, blood pressure increases in those patients with pre-existing hypertension. This side effect is minimised by ensuring a slow increase in Hb, and ensuring adequate blood pressure control prior to initiation of treatment

Iron Therapy

- Functional iron deficiency is very common in patients treated with an ESA
- Iron therapy – usually parenteral, occasionally oral, should be given to all patients with a Hb <110g/L who are not allergic/intolerant of iron if:
    - Ferritin <200 μg/L
    - TSat <21%
    - Ret-He <29pg
- Serum [Ferritin], TSat and Ret-He should be checked three-monthly for pre-dialysis patients and six-weekly for dialysis patients
- Intravenous iron should be administered as per the Trust protocol for the Management and Administration of intravenous iron in adults under the renal directorate (Trust docs ID: 1568)

Poor Response

A poor response to ESA therapy can be defined as an increase in Hb of <1g/L per month, despite the recommended dose of ESA being prescribed.

- Check patient compliance if self-administering
- The commonest cause of poor response to treatment or a falling Hb on maintenance treatment is functional iron deficiency (see above). A trial of intravenous iron (as per protocol) is indicated if there is any doubt and certainly if [Ferritin] <200 μg/l and TSat <21% and Ret-He <29pg
- Consider all factors as per *Appendix 1 - ESA Non-Responders*
- Measurement of CRP may be a useful screening test for infection/inflammation. If an inter-current infection develops in a patient on maintenance treatment it is reasonable to continue the same dose of ESA (parenteral iron is usually discontinued)
- An un-correctable resistance to treatment (*e.g.* myelodysplasia) is best managed by stopping ESA and administering regular transfusions as necessary. Transfusions are supervised by the renal unit for dialysis and transplant patients and by the GP for all other pre-dialysis patients

Blood transfusions

Red blood cell transfusions are indicated in severely anaemic patients with recognised symptoms or signs of anaemia, *e.g.* the patient with acute blood loss associated with haemodynamic instability or the patient with severe angina. The ESA resistant patient with blood loss whose haemoglobin concentration decreases to critical levels should also be considered for blood transfusion.

However, blood transfusions will blunt the response to ESA therapy (by increasing [hepcidin]) and therefore should be used sparingly.

Additionally, blood transfusions may result in sensitisation and should be avoided in people with anaemia of CKD in whom a kidney transplant is a treatment option: Inform the Transplant Coordinator if a potential kidney transplant patient receives a blood transfusion (NICE 2015).

Clinical Audit Standards / Audit Standards / Monitoring Compliance

An annual audit is overseen by the ASN and discussed at the CGCD meeting see Appendix 6

Parameters to be audited include: Hb, [Ferritin], TSat, Ret-He, ESA dose, Parental iron dose to Renal Association standards. The results are published annually and are discussed in the Renal Clinical Governance meeting

Summary of Development and Consultation Process Undertaken Before Registration and Dissemination

The author listed above drafted this guideline on behalf of the Renal Unit.

Dr Karim has agreed the final content.

During its development it has been circulated for comment to all Renal Consultants listed on the front of the document. It has been shared with JPUH and was revised in June 2021.

Further information

The (NNUH) Renal Consultants will be pleased to discuss any aspect of treatment of ESA or the management of an individual on an ESA see contact information at appendix 7

References/Guidelines

NICE Guidelines NG8 2015

UK Renal Association 5th Edition, 2009-2012 Final Version

European Best Practice Guidelines 2004

Kidney Disease Outcome Quality Initiative (K_DOQI) guidelines 2012

Nursing and Midwifery Council (NMC) (2018) The Code

Appendices

ESA Non-Responders

Standard letter to patient for self-administration of Darbepoetin

Pre-dialysis epo letter to GP

Healthcare registration form and prescription

Darbepoetin dose update letter

Anaemia Algorithm

ESA Non-Responders — Appendix 1

Patients with a poor response to ESA therapy may require further assessment.

The following should be considered if up to date haematinic results (Ferritin, TSat, Ret-He B12, Folate) are satisfactory:

ESA deficiency	• Ensure patient is receiving prescribed dose. • Hypertensive patients may have doses omitted and Home-HD and pre-dialysis patients may be non-compliant. • Consider prescription revision in very large patients.
Blood loss	• Consider occult GIT loss if response to high dose parenteral Fe therapy is suboptimal. • Refer for GIT investigations if indicated. • Clotted circuits. • These will be recorded on eMed.
Inflammation	• Infection or malignancy may be indicated by an acute phase response.
Cytopaenia	• Leucopoenia or thrombocytopenia may indicate either a marrow or a hepatic pathology. • Check liver biochemistry, blood film and a myeloma screen and refer to Haematology/Gastroenterology as indicated.
Haemolysis	• Check MCV + Bilirubin + LDH. • Arrange DCT + film + coagulation studies if evidence of haemolysis.
Hyperparathyroidism	
Al^{+++} toxicity	• Check Aluminium [Al^{+++}] if patient is using Al^{+++} -containing phosphate binder.
Chloramines	• Consider if an 'epidemic' of ESA non-response on the main unit, or in individual Home-HD patients.
Pure Red Cell Aplasia (PRCA)	• Consider if low reticulocyte count. • Refer for marrow examination prior to checking anti-Epo antibodies.

Appendix 2

Standard Letter to patient for self-administration of Darbepoetin

Our Reference:
Letter date:

Dear Mr/Mrs/Ms …….

Important information about your Darbepoetin (Aranesp®) prescription. Please read.

Further to our telephone conversation today; you have been prescribed darbepoetin ……μg injections every four weeks.

I will see you as discussed on ddx/mm/yyyy to train you in self-administration.

A firm called Healthcare at Home will be in touch with you within a couple of weeks to arrange delivery of your injections: contact me if you do not receive the delivery. The darbepoetin must be stored in the fridge at 2-8 degrees in its original packing: DO NOT FREEZE the packet.

It is important that you have a blood test every month. We need to monitor your response to treatment (an increasing haemoglobin concentration) and adjust your darbepoetin dose accordingly. I enclose blood request forms: let me know when you need more (the forms must NOT be photocopied as each blood test is individually electronically recorded). Please arrange to have the blood test at your GP's surgery or at NNUHT or NCH

Your GP's practice will check your blood pressure when you attend for the blood test. This is to ensure that your blood pressure is lower than 170/100: if it is higher on two consecutive readings, you must NOT administer your darbepoetin until action has been taken to bring your blood pressure under control.

If you have any questions or problems, please do not hesitate to contact me.

Yours sincerely

Anaemia Specialist Nurse

Appendix 3

Pre-dialysis Epo letter to GP

Anaemia Specialist Nurse
East Block Level 3 Room 42.3018
Norfolk & Norwich University Hospital NHS Trust
Colney Lane
Norwich NR4 7UY

direct dial: 01603 288377
email: xxxxxxxxxxx

Tel No: 01603 288377 (direct line)
Email: xxxxxxxxxxxx
Letter date:

Dear Dr…

Patient Details: …….

Mr/Mrs……. has been commenced on Darbepoetin epo injections to treat renal anaemia.

I have arranged delivery of the prescription.

I will arrange to teach self-administration of the injections.

We would be grateful for your help with monitoring in order to achieve a target Hb in the range 110-120g/L.

- Monthly FBC, 3-monthly Ferritin/TSat, Ret-He, and 6-monthly B12/Folate.
- We are aiming to achieve a target Hb in the range 110-120g/L
- **This will be monitored by me**
- I supply the blood request forms for these tests
- Monthly blood pressure checks with your surgery
- The blood pressure must be lower than 170/100mmHg and we would be happy to advise about anti-hypertensive therapy

Thank you for your continued help.

Yours sincerely

Anaemia Specialist Nurse

Appendix 4

– ESA Prescription and Healthcare@Home Registration Form

Private and Confidential

Healthcare at Home

Aranesp® Homecare Patient Registration Form

Patient Details		For HAH use only	
Title	Mr ☐ / Mrs ☐ / Ms ☐ / Miss ☐	Hospital Number	
First name		Date of Birth	
Surname		Gender	☐ Male ☐ Female
Address Postcode		Authorised Delivery Address (if different from home) Postcode	
Parent / Guardian Name (if applicable)		Known Allergies/ Sensitivities	
Tel		Email	
Mobile		Patient Status	☐ New Patient ☐ Therapy Switch
Patient Diagnosis	☐ Haemodialysis ☐ Peritoneal Dialysis ☐ Pre-Dialysis ☐ Transplant ☐ Oncology/Haematology ☐ Other (please specify)		

Referral Information			
Consultant Name		GP Name	
Hospital Address Postcode		GP Address Postcode	
Nurse Specialist		Pharmacist	
Tel:	Email:	Tel:	Email:
Contact for Prescriptions		Preferred Method for requesting Prescription Renewals	☐ Telephone ☐ Fax ☐ Email
Tel:	Fax:		
Email:			

Service Details	
Service Required	Nurse Training & Delivery ☐ Delivery Only ☐
Please deliver every	4 weeks ☐ 8 Weeks ☐ 12 Weeks ☐ 16 Weeks ☐
Date of first delivery required (please specify)	

Invoicing Details	MUST BE COMPLETED IN FULL		
Contact Name or Specific Department		Tel:	Fax:
Address & Postcode			

Please register the above patient on the Aranesp® Homecare programme

Signature		Date	
Name of Prescriber		Qualifications	

Patient authorisation:

1. I authorise Healthcare at Home Ltd to hold and use my personal details in accordance with the Data Protection Act 1998 (and any amendments thereto) for the purpose of supplying medicines to me and advising on their use.
2. I authorise my prescriptions to be sent directly to Healthcare at Home Ltd and for them to dispense accordingly. Furthermore, I authorise Healthcare at Home Ltd to request repeat prescriptions from my prescribing doctor on my behalf.
3. I understand that I must still attend my regular appointments so that my health is monitored effectively
4. I accept that if I cannot comply with the home delivery requirements then I will need to attend the hospital to receive my treatment.
5. I agree that the home delivery provider may occasionally contact me to obtain feedback on my satisfaction with the service.
6. I understand that I can withdraw from the service at any time and this will not affect my treatment at my hospital.
7. For patients under 16 years old, a parent or guardian will need to sign the registration form and deliveries.

Patient/Spouse/Carer signature: Date:

Please return completed form with a valid prescription to: Pharmacy Department, Healthcare at Home Ltd, Fifth Avenue, Centrum 100, Burton-upon-Trent, Staffordshire, DE14 2WS **Tel No: 01283 501390 Fax No: 0870 421 1539 – Urgent Only (for Deliveries within 48hrs)**

PRF185 Issue 3
February 2012

Healthcare at Home

Private and Confidential

ARANESP® Homecare Prescription

Hospital Details:		
Hospital Name		Prescription type
Hospital Address Post Code		☐ New patient ☐ Renewal ☐ Dose change

Patient Details (please affix label if preferred)		
Name (including title)		
Address Post Code		Patient status ☐ New patient ☐ Registered ☐ Therapy Switch

Hospital Number	NHS Number
Date of Birth	Allergies
Weight (KG)	Purchase Order Number

Drug	Total Dose	Route	Frequency
Aranesp® (Darbepoetin alfa) _____ micrograms	_____ micrograms		
Aranesp® (Darbepoetin alfa) _____ micrograms			

Presentation	☐ Pre-filled Syringe ☐ SureClick™ Pen
Duration of prescription	Please deliver every 4 ☐ 8 ☐ 12 ☐ 16 ☐ weeks To cover a maximum of 24 weeks supply unless directed otherwise. Supply for _____ weeks

Signature	Date	Name of Prescriber (Block Capitals)
Qualifications		Telephone
Clinical Screening – If applicable		
Signature	Date	Name of Pharmacist (Block Capitals)

Please forward signed original copy to: Pharmacy Department, Healthcare at Home Ltd, Fifth Avenue, Centrum 100, Burton-upon-Trent, Staffordshire, DE14 2WS Tel No: 01283 501390
For Urgent Requests Only Fax to: 0870 421 1539

Form PH099
Issue 3
February 2011

Appendix 5

Darbepoetin dose update

Tel No: 01603 288377 (direct line)

Letter date:

Dear Dr…

Patient Details:

Mr / Mrs…….…… Hb has increased/decreased to …. g/L.

I have reduced/increased the Darbepoetin dose to ..…… every ..…..weeks

I have informed Mr/Mrs……..….

Thank you for your continued help with monitoring

Best wishes,

Anaemia Specialist Nurse

Monitoring Compliance / Effectiveness Table						**Appendix 6**
Element to be monitored	**Lead responsible**	**Monitoring Tool / Method of monitoring**	**Frequency of monitoring**	**Lead responsible to develop an action plan**	**Reporting arrangements**	**Sharing and disseminating lessons learned & recommended changes in practice as a result of monitoring compliance with this document**
Anaemia Nurse Specialist	Janet Guyton	Patient Questionnaire (this is registered with Clinical Audit)	Annually	Janet Guyton	Renal Department Clinical Governance	Medical Division Governance?

Appendix 7a

Renal department
contact details for Erythropoiesis Stimulating Agent (ESA) patient's

The Renal Consultants:

Dr Althaf, Dr Andrews, Dr Karim, Dr Todd, Dr Varma, Dr Friedla, would be pleased to discuss any aspect of treatment of ESA or the management of an individual on an ESA. Please contact them via the hospital switchboard 01603 286286 on the following extensions:

Dr Althaf	Ext 2659
Dr Andrews	Ext 2659
Dr Karim	Ext 4930
Dr Todd	Ext 4248
Dr Varma	Ext 3076
Dr Friedla	Ext 4935
Dr Patrick	Locum

Alternatively you can contact our Anemia Specialist Nurse Janet Guyton on 01603 288377 Mon-Fri between the hours of 7am-4pm.

Out of hours please leave a message or contact the Consultant's secretary.

Appendix 7b

James Paget University Hospitals NHS
NHS Foundation Trust

Renal department
contact details for Erythropoiesis Stimulating Agent (ESA) patient's

The Renal Consultants:

Dr Patrick and Dr Hussein would be pleased to discuss any aspect of treatment of ESA or the management of an individual on an ESA. Please contact them via the hospital switchboard 01493 452452 on the following extensions:

Dr Patrick	Ext 3842
Dr Hussein	Ext 3632

Alternatively you can contact our Anemia Specialist Nurse Maricel Ronquillo on 01493 452452 Mon-Fri between the hours of 7am-4pm.

Out of hours please leave a message or contact the Consultant's secretary.

Appendix 8

James Paget University Hospitals NHS
NHS Foundation Trust

Renal Unit
Lowestoft Road
Gorleston
Great Yarmouth
Norfolk
NR31 6LA

Main switchboard: 01493 452452
Direct Dial: 01493 452484/452422
Direct Fax: 01493 452814
Pager: 2047
E mail
maricel.ronquillo@jpaget.nhs.uk

Dear
,
NHS Number: Date of Birth:

The renal doctor wishes to commence you on NeoRecormon to help treat your anaemia. NeoRecormon comes as a small injection that is injected into the tissue just under the skin. Eight weeks supply of injections will be dispensed by the pharmacy at the James Paget University Hospital (JPUH) via a homecare delivery service who deliver the medicine to your door or another address (GP surgery etc.) as directed by you.

Take the injection to your GP surgery if they have agreed to administer the NeoRecormon to you unless you are self-administering. The injections must be stored in the fridge in their original packing **but must not be frozen.** (NB: The back of the fridge can sometimes be freezing.)

The injection will be omitted if your blood pressure (BP) is greater than 170/100. Your BP will be taken each time before the injection is given. Please inform me of any change of address or GP address so that I may maintain the correct information.

I will be reviewing your blood tests and your NeoRecormon dose. I am a Non-Medical Prescriber which means I have been trained in prescribing medications within my sphere of expertise. My professional 'pin' number is below should you wish to check this with the Nursing and Midwifery Council (NMC).

Ideally you should have your haemoglobin (Hb) tested every month. Your GP's surgery will usually arrange this. We will of course take a blood sample when you come to renal clinics. We want your Hb to be 110-120 grams per litre (g/l).

We are usually happy for you to give these injections yourself. However, if you feel unable to do this then please arrange an appointment with the nurse at your GP surgery.
Should you require any further information then do not hesitate to contact me.

Yours sincerely

Appendix 9

Departmental Record of Signatories

This is the departmental list of all those who have read and agreed to act within the parameters of this Guideline and deemed competent. Each individual has kept a signed copy of the Guideline for his / herself.

Print Name	Sign	Date *(ddmmyyyy)*