

Blackpool Teaching Hospitals NHS Foundation Trust

FY1 SURVIVAL GUIDE

Clinical Hints and Tips

2016

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INTRODUCTION

Hello FY1s.

This is a booklet we have put together with some pocket sized, useful points of reference when first starting work, especially for on-call shifts. Prescribing, being called to see sick patients, and being asked for advice in clinical situations can be quite daunting at the beginning. We have included information that we think we would have found helpful when we first started, and hopefully this will give you just some quick hints and tips for some common things you might encounter.

We have also included the hospital pathways that have been developed for some common conditions, and which may help you with your initial assessment/management.

Don't panic, good luck, and enjoy!

From your previous FY1s.

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- Abdo pain
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USEFUL CONTACT DETAILS

- To bleep: '50' (you will hear two beeps) then the number you want to bleep (wait for another two beeps), then the number of the phone you are on (you will hear many beeps)
- Here is a list of some of the useful contacts you will need. It is not an exhaustive list. Other numbers including these can easily be found using the search section at the top of the intranet page
- If you cannot find a number, you can always go through switchboard by pressing "0"

A&E Xray	3400
Acute response team	Bleep 600
Bereavement office	4417 / 3723
Blood Bank	3747/3746
Central Xray	3657
Crash call	2222
CT & MRI	6619 (CT control room 3073)
Dietician	6777
Discharge team	5266
Elaine Nicholson (HPEC)	3193
ECG	Bleep 086 / 087
Echo	7735
Hospital security	Bleep 728 / 5555
Medical staffing	3726
MHLT	5268 / 6841
Pathology	6950
Pharmacy	3784 / 4781
Pharmacy medicines information	3791
USS	6645
Vascular USS	6930

USEFUL MEDICATIONS

ANALGESICS	ROUTE	DOSE	FREQ.
Buscopan	PO/IV	10 – 20 Mg	QDS
Co-Codamol (30/500)	PO	1 – 2 Tabs	QDS
Codeine Phosphate	PO/IM	30 – 60 Mg	QDS
Diclofenac	PO/IM/PR	50 – 100 Mg	TDS
Ibuprofen	PO	200 – 400 Mg	TDS
Morphine	IV/PO	5 – 10 Mg	STAT
Paracetamol	PO/IV	500mg – 1g	QDS
Tramadol	PO	50 – 100 Mg	QDS

ANTI-EMETICS	ROUTE	DOSE	FREQ
Cyclizine	PO/IV/IM	50 Mg	TDS
Domperidone	PO	10 – 20 Mg	QDS
Metoclopramide	PO/IM/IV	10 Mg	TDS
Ondansetron	PO/IV/IM	8 Mg	TDS
Prochlorperazine	PO	10 – 20 Mg	TDS

GASTRIC REFLUX	ROUTE	DOSE	FREQ.
Gaviscon	PO	5 – 10 MI	TDS
Omeprazole	PO	20 Mg	OD
Ranitidine	PO	150 Mg	BD

LAXATIVES	ROUTE	DOSE	FREQ.
Senna	PO	15mg	BD/TDS
Movicol	PO	1-2 Sachets	BD/TDS
Lactulose	PO	15ml	BD
Glycerine Suppository	PR	4 gram (TT)	STAT/PRN
Phosphate Enema	PR	T	STAT/PRN

AGGITATION/AGGRESSION	ROUTE	DOSE
Diazepam	PO	5-10mg

AKI

This is a common condition that you will be expected to manage on a day-to-day basis.

There is a hospital AKI pathway which is included in the pathways section of this booklet.

DEFINITION	<ol style="list-style-type: none">1. An increase in serum creatinine > 1.5X above baseline value in 1 week.2. A urine output of <0.5ml/hour for >6 consecutive hours
COMMON CAUSES	<ol style="list-style-type: none">1. Sepsis2. Hypoperfusion3. Medications4. Obstruction
INVESTIGATIONS	<ol style="list-style-type: none">1. Urinalysis, send msu2. Fluid balance chart3. May need a catheter to measure urine output4. Input output chart5. Bloods: U+E, FBC6. ABG/ VBG looking for acidosis and hyperkalaemia7. ECG (hyperkalaemia)8. USS KUB (If you suspect obstruction)
INITIAL MANAGEMENT	<ol style="list-style-type: none">1. Check the catheter isn't blocked2. Fluid challenge 500ml crystalloid stat, measure response by urine output, bp3. Treat underlying infection (remember to use renal dose of tazocin and gentamicin)4. Avoid nephrotoxic drugs5. Treat hyperkalemia

ALCOHOL WITHDRAWAL

- Complete the Audit C in admissions clerking, if score 8-12 inform alcohol liaison.
- Look out for anxiety, fine tremor, sweating, vomiting, headache, insomnia, tachycardia, hallucinations and fits.

They will advise you regarding

- IV vitamins:
 - pabrinex (2x (I +II), IV, TDS for 3-5 days)
- oral vitamins:
 - thiamine (100mg, PO, TDS)
 - Vitamin B co-strong (2 tablets, PO, TDS)
 - Folic acid (5mg, PO, OD)
- Chlordiazepoxide:
 - PRN chlordiazepoxide (10-30mg depending on patient needs) VS fixed dose reducing regime of chlordiazepoxide (see tables below)
- Can use PRN haloperidol or lorazepam **doses are different.

MONITOR:

- patient's vital signs
- level of alertness
- fluid intake

Watch out for **wernickes encephalopathy**, caused by thiamine deficiency

- Symptoms can develop acutely or over a few days
- Triad of confusion, cerebellar ataxia and ocular palsies.
- Can be accompanied by apathy, drowsiness, disorientation and amnesia.
- Can develop into a coma.

Table 1: Chlordiazepoxide reducing dose regimen under 65 or with severe withdrawal

Day (1)	30	30	30	30 =	120mg total
Day (2)	30	20	20	30 =	100mg total
Day (3)	20	20	20	20 =	80mg total
Day (4)	20	10	10	20 =	60mg total
Day (5)	10	10	10	10 =	40mg total
Day (6)	10	0	0	10 =	20mg total
Day (7)	STOP				

Consider PRN Chlordiazepoxide 20mg - 30mg for breakthrough AWS symptoms

Table 2: Chlordiazepoxide reducing dose regimen in patients over 65 or patients with significant co-morbidities

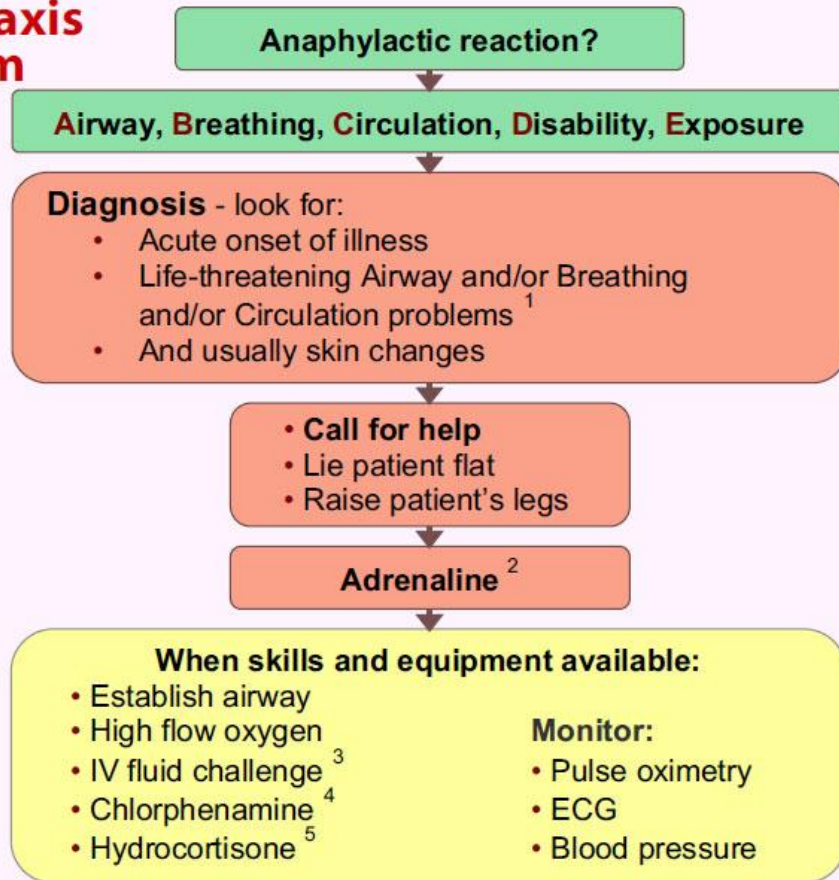
Day (1)	20	20	20	20 =	80mg total
Day (2)	20	10	10	20 =	60mg total
Day (3)	10	10	10	10 =	40mg total
Day (4)	10	5	5	10 =	30mg total
Day (5)	5	5	5	5 =	20mg total
Day (6)	5	0	0	5 =	10mg total
Day (7)	STOP				

Consider PRN Chlordiazepoxide 10mg - 20mg for breakthrough AWS symptoms.

NB Patients with Hepatic Impairment and Renal Impairment – Consideration should be given to the use of benzodiazepines with shorter half lives and under caution. Start with smaller initial doses and avoid use in severe hepatic impairment.

ANAPHYLAXIS

Anaphylaxis algorithm



1 Life-threatening problems:
Airway: swelling, hoarseness, stridor
Breathing: rapid breathing, wheeze, fatigue, cyanosis, SpO₂ < 92%, confusion
Circulation: pale, clammy, low blood pressure, faintness, drowsy/coma

2 Adrenaline (give IM unless experienced with IV adrenaline)
 IM doses of 1:1000 adrenaline (repeat after 5 min if no better)

- Adult 500 micrograms IM (0.5 mL)
- Child more than 12 years: 500 micrograms IM (0.5 mL)
- Child 6 -12 years: 300 micrograms IM (0.3 mL)
- Child less than 6 years: 150 micrograms IM (0.15 mL)

Adrenaline IV to be given **only by experienced specialists**
 Titrate: Adults 50 micrograms; Children 1 microgram/kg

3 IV fluid challenge:
 Adult - 500 – 1000 mL
 Child - crystalloid 20 mL/kg

Stop IV colloid if this might be the cause of anaphylaxis

	4 Chlorphenamine (IM or slow IV)	5 Hydrocortisone (IM or slow IV)
Adult or child more than 12 years	10 mg	200 mg
Child 6 - 12 years	5 mg	100 mg
Child 6 months to 6 years	2.5 mg	50 mg
Child less than 6 months	250 micrograms/kg	25 mg

March 2008

DIABETIC KETOACIDOSIS

DEFINITION	<ul style="list-style-type: none"> • Hyperglycaemia (blood glucose >11.1 mmol/l) or known diabetic • Ketonuria (++ or more on Dipstix), or significant ketonaemia • Acidosis, bicarbonate < 15 mmol/l or arterial pH < 7.3.
IMMEDIATE MANAGEMENT	<ul style="list-style-type: none"> • IV access. • Commence Fluids • Commence sliding scale • Consider ITU/HDU if: <ol style="list-style-type: none"> 1. confused 2. hypotensive (Systolic Blood Pressure (SBP) < 90 mm Hg) 3. Severe acidosis with bicarbonate < 7.0
INVESTIGATIONS	<ul style="list-style-type: none"> • Blood <ul style="list-style-type: none"> ○ Plasma glucose ○ urea and electrolytes ○ venous bicarbonate ○ Measure Urea and Electrolytes (U&E's) 2 hourly for the first 6 hours and then 4 hourly for 24 hours or until recovery. • ABG • Consider Blood, sputum, urine culture
IV FLUIDS	<ul style="list-style-type: none"> • Give 1L of fluid over the first hour • Then adjust rate relative to age, pmh of patient (e.g Reduce rate in elderly, cardiac disease, mild DKA) • Typically 1L over 1-2 hours then 1L over 4-6 hours • Once blood glucose ≤ 15.0 mmol/l, change to 5% glucose (or dextrose/saline (glucose4%/sodium chloride0.18%)) infusion, 1L 8 hourly • NB: replace potassium as required

INSULIN SLIDING SCALE

Prescribe: 50 units of Soluble Insulin (Human Actrapid or Humulin S) in 50ml sodium chloride 0.9%

- Measure BM hourly
- Adjust sliding scale accordingly
- If blood glucose level has not fallen at 2 hours, check insulin pump and IV connections, then increase insulin rate to 10 units/hour
- Bicarbonate usually unnecessary – seek HDU/ITU advice if considering.

ELECTROLYTES

HYPERKALAEMIA

K⁺ >5.6 is hyperkalaemic

K⁺ > 7.0 or >5.6 WITH ECG changes requires immediate treatment

ECG CHANGES	<ul style="list-style-type: none"> • Tall tented T waves • Flattened P waves • Widened QRS • Arrhythmias.
INITIAL Mx	<ul style="list-style-type: none"> • ABCDE assessment • Ensure you have venous access • Review patient history (is this new? / explained by conditions or medications?) • Exclude life threatening causes: renal failure, tissue necrosis, acidosis • Stop any relevant medications (k⁺ sparing diuretics etc)
INVESTIGATIONS	<ul style="list-style-type: none"> • URGENT repeat U&Es • Blood gas for pH • ECG and consider cardiac monitoring if abnormal
ACUTE TREATMENT	<ul style="list-style-type: none"> • 10mls of 10% calcium gluconate IV over 2 minutes : <i>to stabilise cardiac activity (repeat ECG after this)</i> • Salbutamol nebs 5mg : <i>drive K into cells</i> • Insulin-dextrose infusion : <i>drive K into cells</i> 10 units actrapid in 50mls of 50% glucose over 10 minutes
TREATMENT	<ul style="list-style-type: none"> • Calcium resonium 15g PO : <i>removes excess K from body</i> Onset of action is 2 - 12 hours

Also remember to make a senior aware and get help whenever you feel you aren't managing

HYPOKALAEMIA

K⁺ <3.0 is hypokalaemia

K⁺ <2.5 or <3 WITH ECG CHANGES requires treatment.

ECG CHANGES	<ul style="list-style-type: none"> • Arrhythmias • Long PR interval • ST depression.
TREATMENT	<ul style="list-style-type: none"> • Replacement of K⁺ - see table for doses.

HYPERNATRAEMIA and HYPONATRAEMIA

Sodium levels >145 or <135

Very common, especially hyponatraemia

IMPORTANT FEATURES	<ul style="list-style-type: none"> • Drowsiness • Decreased GCS or haemodynamic instability • Can cause SEIZURES.
INVESTIGATIONS	<ul style="list-style-type: none"> • Important to assess volume status – hypovolaemic, euvolaemic or overloaded? • Usually caused by: <ul style="list-style-type: none"> ○ fluid loss (diuretics, vomiting/diarrhoea) ○ or excess (Check what IV fluids are being given) e.g diluted through excess fluid or hypernatraemic from too much 0.9% saline • Get repeat U&Es
MANAGEMENT	<ul style="list-style-type: none"> • For HYPERNATRAEMIA <ul style="list-style-type: none"> ○ fluid replacement to correct Na⁺ slowly, dependent on volaemic state. • For HYPONATRAEMIA <ul style="list-style-type: none"> ○ treatment depends on volaemic status, get senior advice if you are not sure. • If for sodium replacement remember this should be done slowly. • Most patients will need daily bloods to monitor U&Es • Oxford handbooks (medicine and foundation programme) have helpful sections on this

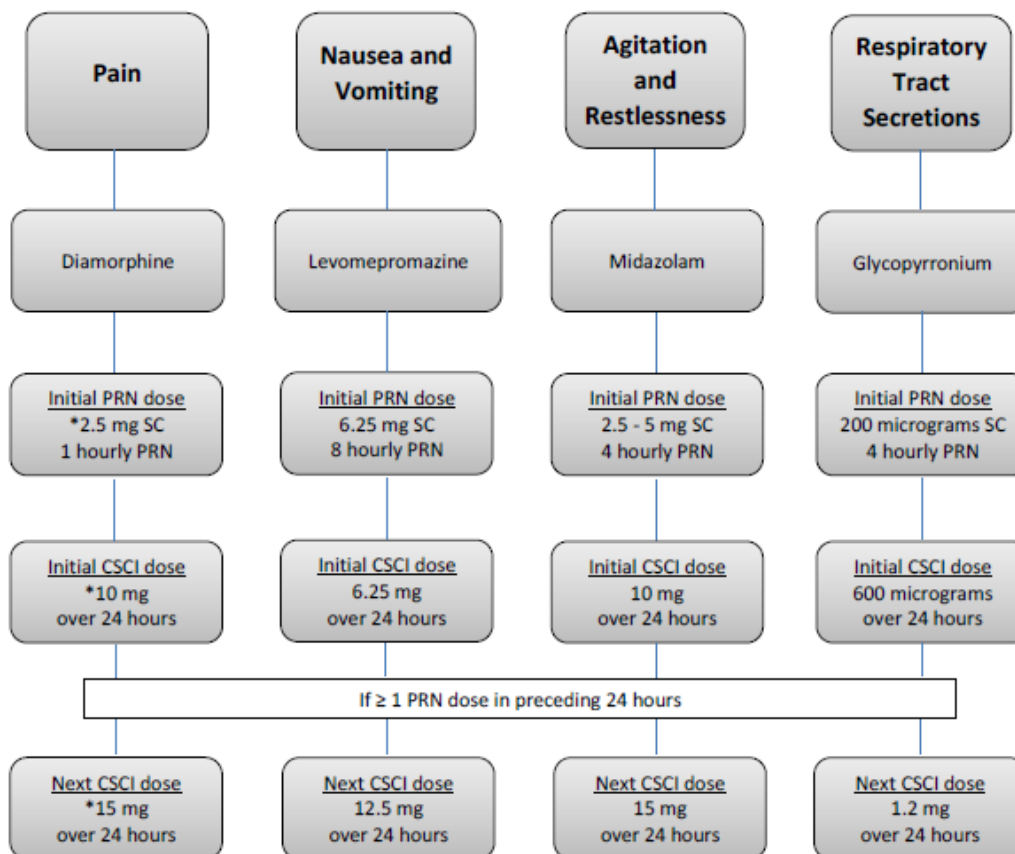
ELECTROLYTE REPLACEMENT

Electolyte	Level	Oral	IV
Potassium	3.0-3.5	Sando K 1 TDS (12mmol/tablet) OR Kay-cee-L 10ml BD (1mmol/ml)	20mmol KCL in 1 litre 0.9% NaCl over 8 hours
Potassium	2.5-2.9	Sando K 2-3 TDS (12mmol/tablet) OR Kay-cee-L 10ml TDS (1mmol/ml)	40mmol KCl in 1 litre 0.9% NaCl over 8 hours
Potassium	<2.5	Sando K 3-4 TDS (12mmol/tablet) OR Kay-cee-L 10ml TDS (1mmol/ml)	40mmol KCl in 1 litre 0.9% NaCl over 4 hours RETEST before giving more as needed
Magnesium	0.51-0.70	Magnesium glycerophosphate 2 TDS (4mmol/tablet)	8mmol (2g) MgSO ₄ in 100ml 0.9% NaCl over 2 hours
Magnesium	≤ 0.50	Magnesium glycerophosphate 2 TDS (4mmol/tablet)	12mmol (3g) MgSO ₄ in 100ml 0.9% NaCl over 3 hours
Phosphate	≤ 0.80	Phosphate Sandoz 2 TDS (16mmol/each)	7.5ml/hr over 12 hours (9mmol) of phosphate polyfusor

NB: Prior to further supplementation electrolytes should be checked perhaps more than once per day if required.

END OF LIFE - FOUR CORE DRUGS

Patients may be prescribed different end of life drugs anticipatory medications if they are intolerant of these recommended first line medications. For further information, please contact local Specialist Palliative Care Team for advice.



* For patients established on oral morphine or oxycodone, follow guidance below for conversion of oral to equivalent subcutaneous dose. If the patient is on a buprenorphine or fentanyl patch, leave the patch in situ, change as usual and discuss with the Specialist Palliative Care Service for advice regarding further analgesia. If a patient is receiving an alternative opioid, discuss with Specialist Palliative Care Service for advice. If the patient has moderate to severe renal impairment, discuss with the Specialist Palliative Care Service for advice regarding further analgesia.

- Stop oral morphine
 - Convert to a 24 hour CSCI of diamorphine, by dividing the total daily dose of oral morphine **by 3** e.g.
- | Total daily oral morphine | CSCI diamorphine dose |
|---------------------------|-----------------------|
| 60 mg | 20 mg |
- Prescribe a rescue dose of diamorphine that is 1/6th – 1/10th of the calculated total CSCI diamorphine dose 1 hourly SC PRN

- Stop oral oxycodone
- Use a 3:2 conversion to determine the oral:CSCI dose
- Divide the oral dose by **1.5** to obtain the CSCI dose

Total daily oral oxycodone	CSCI oxycodone dose
40 mg	25 mg

- Prescribe a rescue dose of oxycodone that is 1/6th – 1/10th of the calculated total CSCI oxycodone dose 1 hourly SC PRN
- Titrate dose as necessary; discuss with the Specialist Palliative Care Service if pain not controlled on **60 mg** oxycodone over 24 hours.

SCREENS

You may be asked to send blood for different screening tests. On Cyberlab you have to add each different component of the screen. Some tests are sent away so results will take a while to return. Below are some of the main components of the screens, this is just a guide so remember to check that this is all your consultant needs.

SCREEN	TESTS
HEPATIC SCREEN	<ol style="list-style-type: none">Hepatitis A: HAV IgMHepatitis B: HBsAg (active infection) HBs IgG (immunity)Hepatitis C: HCV IgG
VASCULITIC SCREEN	<ol style="list-style-type: none">ANAC3, C4ANCARheumatoid factorESRCRP
PARANEOPLASTIC SCREEN	<ol style="list-style-type: none">Antineuronal nuclear antibody (ANNA-1, ANNA-2, ANNA-3)Purkinje cell cytoplasmic antibody (Type 1 and 2)

SEIZURES

MEDICAL EMERGENCY especially if lasting >5minutes

FIRST ASSESSMENT	<ul style="list-style-type: none">• ABCDE approach• AIRWAY – insert OP or NP airway, give o2• GLUCOSE – get BMs• Record timings (make sure someone does this if you can't)• Try to ensure patient is in safe environment – recovery position etc• Patient Hx – known epileptic? Any evidence for cause in notes (eg electrolytes, Alcohol dependence?)• IV access and bloods
IF >5 MINS	<ul style="list-style-type: none">• SENIOR help immediately• Give IV lorazepam 4mg IV over 2 mins or PR diazepam 10mg• Get advice re: phenytoin infusion - 15mg/kg IV at 50mg/min• Involve anaesthetics / ICU if not responsive to treatments

TPN

- Your seniors will ask for this when patient are no longer able to eat orally
- Get blue form off nursing staff
- Fill in blue form – decide if light or heavy tpn is needed – this will be on patients weight and calorific intake pre admission (i.e. little old ladies will always only need smaller tpn)
- This form needs to go to pharmacy
- Nursing staff will place this up but you will need to prescribe it on fluid chart

TRANSFUSION REACTION

FEATURES	MANAGEMENT
<p>≥ 2 of</p> <ul style="list-style-type: none"> - temperature > 40° - chest or abdo pain - raised heart rate/ decreased BP - agitation - flushing 	<p>Likely haemolytic transfusion reaction (ABO incompatibility)</p> <ul style="list-style-type: none"> • stop transfusion • call for help • 15L of oxygen • 1L of oxygen STAT • Hydrocortisone 200mg STAT IV • Chlorphenamine 10mg, IV STAT • Monitor BP, IP/OP, ECG, U&E, Clotting/ fibrinogen
<p>Temp < 40°c Shivering</p>	<p>Likely non haemolytic transfusion reaction</p> <ul style="list-style-type: none"> • slow transfusion • paracetamol 1 gram, PO • Monitor observations • Call for help if worsening or no improvement
<p>Tachycardia/ hypotension Bronchospasm Cyanosis Oedema</p>	<p>Likely anaphylaxis</p> <ul style="list-style-type: none"> • Stop transfusion • Call for help • Follow anaphylaxis algorithm
<p>Urticaria ± raised temp less than 40°c ± itch</p>	<p>Likely allergic reaction, observe to exclude anaphylaxis</p> <ul style="list-style-type: none"> • Slow transfusion • Inform senior • Monitor observations • 200mg hydrocortisone , IV STAT • Chlorphenamine 10mg, IV STAT
<p>Fluid overload</p>	<ul style="list-style-type: none"> • Slow transfusion • 15L oxygen & sit up right • Consider furosemide 40mg, Iv STAT • Catheterise • Contact senior if worsening/ not improving

TYPE 2 RESPIRATORY FAILURE

T2RF is hypoxia (o₂ < 8) with hypercapnoea (CO₂ >6)

Common condition among patients with COPD particularly but can occur in other respiratory disease. Some COPD patients have chronic T2RF (and so pH will be normal) but **pH <7.35 IN ANY PATIENT (RESP ACIDOSIS) IS DANGEROUS AND REQUIRES IMMEDIATE ACTION.**

In ANY unwell patient with shortness of breath, be aware of:

- Cyanosis
- Drowsiness / reduced GCS / acute confusion
- Unexplained increase in o₂ requirement
- Tachycardia

ASSESSMENT	<ul style="list-style-type: none"> • ABCDE approach • Especially look for signs of pneumothorax, DVT/PE and cardiac failure • Establish if there is a history of respiratory disease (especially hx of home oxygen use, previous T2RF and previous ICU admissions)
INVESTIGATIONS	<ul style="list-style-type: none"> • Obtain an URGENT ABG <p>samples are usually sent to the lab on ice, in a medical emergency there is a blood gas machine on AMU – ask politely!</p> <ul style="list-style-type: none"> • ECG • CXR • Bloods – FBC, U&Es, CRP
MANAGEMENT (if find T2RF on ABG)	<ul style="list-style-type: none"> • Controlled o₂ therapy is first line – reduce oxygen as much as possible (e.g to 1L via nasal cannulae) aim for sats between 88-92% • INVOLVE A SENIOR EARLY these patients can become very unwell very quickly. • Consider need for Non Invasive Ventilation (bi-pap) - this is a senior decision • Repeat ABGs 1 hour after any change to oxygen or NIV

VERIFICATION OF DEATH

Go and see the body one hour post death:

- Document time and date
- “Asked to see patient to confirm death”
- No response to painful stimuli
- Fixed and dilated pupils
- No respiratory effort of three minutes
- No pulse for one minute.
- No heart sounds for one minute.
- Document whether the patient is fitted with a pacemaker/ radioactive implant.
- Document if next of kin informed.
- Document your name, designation, GMC number and Bleep.

Do not need to put cause of death or write death certificate you will be contacted by bereavement to do a death certificate.

VTE - DALTEPARIN

Dalteparin Treatment Dose for Adults (Non-Pregnant) with Venous Thromboembolism

Body Weight (kg)	Dalteparin Dose (units) Once a day Subcutaneous (s.c) dose
Under 46	7,500
46 – 56	10,000
57 – 68	12,500
69 – 82	15,000
83 and over	18,000

The single daily subcutaneous dosage should NOT exceed 18,000 units

Hyperkalaemia

- Dalteparin treatment may cause hyperkalaemia.
- Patients with chronic renal failure, diabetes or those taking potassium sparing medication e.g. spironolactone, ACE inhibitors are more susceptible.

Dalteparin Dose is Dependent on the Patient's Renal Function

- As dalteparin is renally excreted, it must be used with caution in patients with reduced renal function.
- A renal function test should not delay initiation of the first dose but every effort must be made to base subsequent doses on the result.
- The Serum Creatinine level should not be used to estimate renal function.
- A Creatinine Clearance (Cr Cl) must be calculated.
 - If the estimated CrCl is less than 30ml/min, then the prescriber must contact the on-call Consultant Haematologist for advice.
- Monitoring anti-Xa levels may be required or the use of an alternative product such as unfractionated heparin.

WARFARIN

Over coagulated:

INR	ADVISED TO
3.0 to < 5.0 (target INR 2.5)	<ul style="list-style-type: none"> Decrease maintenance dose by 25 %.
5.0 to 8.0 no bleeding	<ul style="list-style-type: none"> Stop warfarin for 1-2 doses The cause of elevated INR should be investigated The maintenance dose should be reduced Check INR next day Restart when INR <5
>8.0 no bleeding	<ul style="list-style-type: none"> Stop warfarin Give 2 mg of vitamin K (phytomenadione) orally Recheck INR next day Repeat dose of vitamin k (phytomenadione) orally if INR still high after 24 hours The cause of elevated INR should be investigated The maintenance dose should be reduced Restart warfarin when INR < 5
5.0 – 8.0 minor bleeding	<ul style="list-style-type: none"> Stop warfarin Give vitamin K 1-3mg by slow intravenous injection Restart warfarin when INR < 5.0
>5.0 Significant bleeding	<p><u>Seek urgent advice from On-Call Consultant Haematologist.</u></p> <p><u>Also refer to Haematology guideline : Management of over-anticoagulation corp/Guid/093 on the intranet</u></p>

Under coagulated:

Altering the warfarin dose will affect the INR 3 days later

Suitable for patients who have been taking warfarin for 7 days or longer

INR	ADVISED TO
<1.5	<ul style="list-style-type: none"> Use LMWH Treatment Dose until INR in range for 2 days
1.5 to 1.7	<ul style="list-style-type: none"> Increase maintenance dose by 25%
1.8 to 3.0	<ul style="list-style-type: none"> Do not adjust dose. Re check INR in 3 days

PATHWAYS



Scan here to access mobile-friendly versions of all the Better Care Now pathways



FILE IN SECTION 4
Blackpool Teaching Hospitals
NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of Acute Abdominal Pain in Adults.
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a checklist only. A daily record of updated care **MUST** be recorded in the notes.

Acute Abdominal Pain in Adults Pathway Checklist

Consultant: _____

Ward: _____

Write patient details or affix
Identification label

Hospital Number:

Name:

Address:

Postcode:

Date of Birth:

NHS Number:

EMERGENCY EXAMINATION AND INVESTIGATIONS (WITHIN 60 MINUTES OF ARRIVAL)	Check	ASSESSMENT & REFERRAL (WITHIN 3 HOURS OF ARRIVAL)	Check	REFERRED TO GENERAL SURGERY/ WARD	Check
History and examination of the abdomen undertaken		Referred to Obs & Gynae if HCG positive		EWS recorded (within 30 minutes of arrival to ward)	
Baseline Observations: State frequency TPR, B/P, O ₂ Sats, Conscious level		Referral to Vascular services if AAA (Abdominal aortic aneurysm) confirmed			
Pain score assessment. Appropriate analgesia prescribed, administered and monitored		Bladder scan performed if Acute Urinary Retention confirmed			
Record and Document Early Warning Score (EWS)		Patient referred to Urology if Renal Colic confirmed			
Must Do Investigations: FBC, Biochem profile, Urine dipstick, Serum HCG (in all women of childbearing age)		Patient referred to General Surgery if HOPI (haemorrhage, obstruction, peritonism, Ischaemia) confirmed			
		Patient referred to General Surgery if Pancreatitis confirmed and amylase raised			
		Patient referred to Medics if jaundiced OR past history of Chronic Pancreatitis			
				Patient seen by appropriate specialist Middle Grade (within 90 minutes of arrival to ward)	

VS2043

Approved by the Health Records Committee 22/09/2014

Acute Abdominal Pain in Adults Guidelines

Key Principles:

- Always use ABCDE in all acutely unwell patients
- Think of important diagnosis and rule them out
- Have a low threshold for basic investigations
- Call for help early
- Not all abdominal pain is abdominal in origin (MI, pneumonia)
- Always consider gynaecological causes

Calculate Early Warning Score:

The Early Warning Score (EWS) is based on a simple scoring system in which a score is allocated to physiological measurements already undertaken when patients present to, or are being monitored in hospital. A score is allocated to each as they are measured, the magnitude of the score reflecting how extreme the parameter varies from the norm. It is important to emphasise that these parameters are already routinely measured at Blackpool via the POTS Chart and should continue to be recorded on the clinical chart.

HR	3	2	1	0	1	2	3
	≥40	41-50	51-100	101-110	111-129	≥130	
SBP	≤70	71-80	81-100	101-109	≥100		
RR		≤8	9-20	21-24	25-29	≥30	
TEMP		≤35	35.1-36.0	36.1-37.9	38-38.9	≥39	
SPO2	<96	86-91	92-93	≥94			
CNS			New Confusion	A	V	P	T



A score of the following for patients presenting with Acute Abdo Pain should result in:

- 0-1** - Patient being transferred to the Surgical Rapid Access Clinic (SRAC) if slot available
- 2-3** - Referral to Surgical SPR and patient admitted to the Surgical Assessment Unit (SAU)
- 4** - Urgent Senior review and prep for immediate transfer to Theatres

Differential diagnosis of pain dependent on site:

The abdomen can be divided into nine regions (see diagram) or four quadrants:

- Epigastric**
- GI: acute +/- chronic pancreatitis, biliary colic; acute cholecystitis, peptic ulcer disease, perforation
 - Vascular: ruptured AAA
 - Cardiac: myocardial infarction



- Right Upper Quadrant (RUQ)**
- GI: biliary colic, acute cholecystitis, cholangitis, hepatitis
 - Respiratory: lower lobe pneumonia, subphrenic abscess
 - Urological: renal colic, pyelonephritis

- Left Upper Quadrant (LUQ)**
- GI: splenic pathology, acute +/- chronic pancreatitis
 - Respiratory: lower lobe pneumonia

- Right Iliac Fossa (RIF)**
- GI: acute appendicitis, Meckel's diverticulitis, mesenteric adenitis, caecal carcinoma (consider in older patients), perforation, carcinoid tumour, IBD
 - Gynaecological causes: Pelvic Infl ammatory Diseases (PID); ruptured ovarian cyst; torsion fallopian tubes; ectopic pregnancy
 - Urological causes: ureteric colic; pyelonephritis

- Left Iliac Fossa (LIF)**
- GI causes: diverticulitis
 - Gynaecological causes: ectopic pregnancy; torsion fallopian tubes; PID; ruptured ovarian cyst
 - Urological causes: ureteric colic; pyelonephritis

- Suprapubic**
- Urological causes: cystitis; UTI; acute urinary retention
 - Gynaecological causes

This checklist should be supported by a clear medical plan in the patients notes which should be reviewed and updated daily. Any abnormalities should be acted upon and a clear plan of care documented in the patients notes clearly identifying the day of the pathway.



Scan here to access mobile-friendly versions of all the Better Care Now pathways



FILE IN SECTION 4
Blackpool Teaching Hospitals
NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

- Apply this Checklist to all new cases of Acute Kidney Injury (AKI).
- The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
- This is a checklist only. A daily record of updated care MUST be recorded in the notes.

Acute Kidney Injury Pathway Checklist

Consultant: _____

Ward: _____

Write patient details or affix Identification label

Hospital Number:
Name:
Address:

Postcode:
Date of Birth:
NHS Number:

ASSESS RISK OF ACUTE KIDNEY INJURY (AKI)	Check	ASSESS SEVERITY OF AKI, FREQUENCY OF OBSERVATIONS AND FLUIDS AND DOCUMENT AS PART OF MANAGEMENT PLAN	Check	MANAGEMENT OF AKI STAGE 1	Check	MANAGEMENT OF AKI STAGE 2	Check	MANAGEMENT OF AKI STAGE 3	Check
Patient assessed for risk of AKI within 4 hrs				4 hourly urine output (2 hourly if catheterised)		Patient catheterised		Patient catheterised	
Targets set for BP, HR, SpO2, temp, RR, Conscious level and urine output (if catheterised) and frequency of observations		Stage 1 Serum creatinine: Increase of Serum creatinine $\geq 26 \mu\text{mol/L}$ OR increase from baseline of 150-200% Urine Output: $<0.5\text{ml/kg/hr}$ for 6 hours		2 hourly Observations (if variation from recommended frequency document rationale)		1 hourly Observations (if variation from recommended frequency document rationale)		1 hourly Observations (if variation from recommended frequency document rationale)	
Admission blood tests (U&Es, FBC)		Stage 2 Serum creatinine: Increase of serum creatinine from baseline of 200-300% Urine Output: $<0.5\text{ml/kg/hr}$ for 12 hours		Repeat ABG, Creatinine and Electrolytes at 24 hours		Repeat ABG, Creatinine and Electrolytes within 12 hours		Repeat ABG, Creatinine and Electrolytes within 8 hours	
Review of admission blood tests within 3hrs		Stage 3 Serum creatinine: Increase of Serum creatinine $> 400 \mu\text{mol/L}$ OR increase of $>300\%$ from baseline Urine Output: $<0.3\text{ml/kg/hr}$ for 12 hours OR anuric $> 6 \text{ hrs}$		Senior Review within 6 hours		Senior Review within 12 hours		Senior Review within 3 hours	
Full set of observations (at least 4 hourly)		Variation from Stage Documented (E.g $>\text{Stage 3}$, End of Life Care, Ceiling of treatment reached)							
Fluid balance (at least 4 hourly)									
Continue to monitor and recheck bloods daily									

VS133

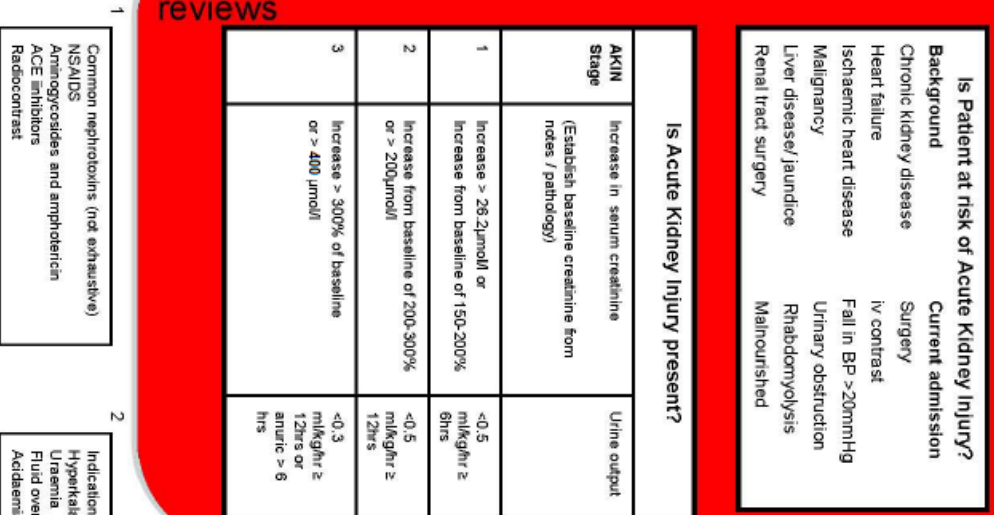
Approved by the Health Records Committee 14/02/14

Acute Kidney Injury Pathway Checklist

Blackpool Acute Kidney Injury (AKI) Guideline

AKIN: acute kidney injury network guidelines
RRT: renal replacement therapy
U&E: ura & electrolytes
CCOS/ART: critical care outreach service / acute response team

Evaluate patient on admission and at subsequent reviews



Is Patient at risk of Acute Kidney Injury?

Background	Current admission
Chronic kidney disease	Surgery Iv contrast
Heart failure	Fall in BP >20mmHg
Ischaemic heart disease	Urinary obstruction
Malignancy	Rhabdomyolysis
Liver disease/jaundice	Malnourished
Renal tract surgery	

Correct dehydration / hypotension
Commence fluid balance chart
U&E at least each second day
Consider stopping nephrotoxic drugs!

Clinical Assessment Including:

- Drug history
- Volumes status
- Evidence of sepsis?

Request Investigations

- Dipstick urine
- Renal ultrasound
- Urine microscopy
- Creatine kinase
- ANCA
- Anti-GBM
- Immunoglobulins
- Complement
- Venous bicarbonate

(Request 'renal panel' on cyberlab)

Take Action:

- Early senior review
- Assess and treat hyperkalaemia
- Correct dehydration / hypotension
- Stop nephrotoxic drugs!
- Treat the aetiology
- Urinary catheter
- Adjust observation (inc urine output frequency) to patient condition
- Commence fluid balance chart
- Daily U&E (consider 12 hourly if AKIN 3)
- Reviewer drug dosing

Refer / Get Help

- If immediate RRT² indicated contact renal physicians (LTH) + critical care (BVH) (Renal SIR @ LTH: 01772 716666)
- AKIN stage 3 or 'intrinsic' cause of AKI contact renal physicians
- Urinary tract obstruction request urgent urology/ review
- Bleep 800 (CCOS / ART) for all cases AKI
- Consider critical care if
 - AKIN \geq 2
 - Hypotension not responding to fluids
 - severe sepsis or other organ failure

This checklist should be supported by a clear medical plan in the patients notes which should be reviewed and updated daily.

Any abnormalities should be acted upon and a clear plan of care documented in the patients notes clearly identifying the day of the pathway.



Scan here to access mobile-friendly versions of all the Better Care Now pathways



FILE IN SECTION 4
Blackpool Teaching Hospitals NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of Cardiac Chest Pain.
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a check list only. A daily record of updated care **MUST** be recorded in the notes.

Cardiac Chest Pain Pathway Checklist

Consultant:

Ward:

Write patient details or affix identification label

Hospital Number:
Name:
Address:
Postcode:
Date of Birth:
NHS Number:

INITIAL ASSESSMENT To be completed within 30 minutes of admission	Check	STEMI (PRIMARY PCI) To be completed within 30 minutes of admission	Check	ST DEPRESSION To be completed within 12 hours of admission	Check	NO ST ↑ ONGOING PAIN To be completed within 12 hours of admission (unless indicated)	Check	NO ST ↑ PAIN FREE To be completed within 12 hours of admission	Check
Aspirin 300mg (unless contraindicated)		Cardiac Specialist Nurse bleeped on 832		Chest X-Ray performed		Chest X-Ray performed (within 30 mins)		Chest X-Ray performed	
12-Lead ECG review in 15 minutes				Clopidogrel 300mg		Analgesia administered		TIMI score reviewed	
Observations: BP, HR, SaO ₂ , Cardiac monitor, Oxygen if SaO ₂ on air <94%				Phone call to Cardiology Reg. for review		Senior review to decide if cardiac chest pain		2nd Panel Troponin (if Low risk TIMI and -ve 1st panel)	
TIMI score calculated		Ticagrelor 180mg administered		GRACE score calculated		Clopidogrel 300mg Administered (unless Contraindicated)		- Clopidogrel 300mg - Fondaparinux 2.5mg (if Med/High TIMI score)	
Bloods taken: FBC, U&Es, TNI, Clotting Studies (if on anti-coagulants)		Sublingual GTN administered (if pain persists)		Urgent review by Cardiology Reg.		ECG review every 15mins until pain free		GRACE score calculated	
ECG every 15 mins until pain free		Antiemetic: Metoclopramide		Management Plan by Cardiology		6-9 Hr Troponin		6-9 Hour Troponin	
						Cardiac monitoring		Phone Referral to Cardiology (if +ve troponin)	
								ECG repeated 12 and 24 hrs (if -ve troponin)	
								Senior Review (if -ve troponin)	

Cardiac Chest Pain Quick Reference Guide

Investigations

Bloods:

- FBC
- U&Es
- Troponin
- Clotting Studies (if on anti-coagulants)

(DO NOT DELAY TREATMENT BY WAITING FOR RESULTS)

- Chest X-Ray

Medications

- Aspirin 300mg (unless contraindicated)
- Ticagrelor 180mg (only if STEMI)
- Clopidogrel 300mg (if high/medium TIMI score **OR** after cardiology review)
- Fondaparinux 2.5mg (if high/medium TIMI score)

Symptoms/Pain Relief

- Sublingual GTN 500mcg (if pain persists)
- Morphine 2.5- 5mg IV (if pain persists)

Contact Cardiology

- **ST Elevation/LBBB =**
- Blp 832 Cardiac Specialist Nurse
- **ST Depression >0.5mm =**
- Blp 770 Cardiology Reg for review
- **Ongoing Chest Pain =**
- Blp 770 Cardiology Reg for review

TIMI (Thrombolysis In Myocardial Infarction) Score Calculation (1 point for each):

- Age >65
- Aspirin use in the last 7 days (patient experiences chest pain despite Aspirin use in past 7days)
- At least 2 angina episodes within the last 24hrs
- ST changes of at least 0.5mm on admission Electrocardiogram
- Elevated serum cardiac biomarkers
- Known Coronary Artery Disease (CAD) (coronary stenosis >= 50%)
- At least 3 risk factors for CAD, such as: Hypertension -> 140/90 or on antihypertensives, current cigarette smoker, hypercholesterolemia, diabetes mellitus, Family history of premature CAD (CAD in male first-degree relative, or father less than 55, or female first-degree relative or mother less than 65).

Score Interpretation:

% risk at 14 days of: all-cause mortality, new or recurrent MI, or severe recurrent ischemia requiring urgent revascularisation.

Score of 0-1 = 4.7% risk
Score of 4 = 19.9% risk

Score of 2 = 8.3% risk
Score of 5 = 26.2% risk

Score of 3 = 13.2% risk
Score of 6-7 = at least 40.9% risk

GRACE (Global Registry of Acute Cardiac Events) Score and Mortality Risk Category

1. Medical History	Points	3. Resting Heart Rate	Points	6. Systolic Blood Pressure	Points	8. Initial Serum Creatinine	Points	Risk of in-hospital death:			
Age in Years	Points	Beats/Min	Points	mmHG	Points	Mg/dL	Points	%	Points	%	Points
<29	0	<49.0	0	<79.0	58	0-0.39	1	<0.2	<80	5.4	180
30-30	8	50-69.9	3	80-99.9	53	0.4-0.79	4	0.3	70	7.3	170
40-49	25	70-89.9	9	100-119.9	43	0.8-1.19	7	0.4	80	9.8	180
50-59	41	90-109.9	15	120-139.9	34	1.2-1.59	10	0.6	90	13	190
60-69	58	110-149.9	24	140-159.9	24	1.6-1.99	13	0.8	100	18	200
70-79	75	150-199.9	38	180-199.9	10	2-3.99	21	1.1	110	23	210
80-89	91	>200	46	>200	0	>4	28	1.6	120	29	220
>90	100							2.1	130	36	230

2. Cardiac arrest at admission	Points	4. ST-segment deviation	Points	7. CHF Killip Class:	Points	Pulmonary Edema	Points
0	0	0	0	No CHF	0	0	0
1	5	1-2	1	1	1	1	1
2	10	3-4	2	2	2	2	2
3	15	5-6	3	3	3	3	3
4	20	7-8	4	4	4	4	4
5	25	9-10	5	5	5	5	5
6	30	11-12	6	6	6	6	6
7	35	13-14	7	7	7	7	7
8	40	15-16	8	8	8	8	8
9	45	17-18	9	9	9	9	9
10	50	19-20	10	10	10	10	10
11	55	21-22	11	11	11	11	11
12	60	23-24	12	12	12	12	12
13	65	25-26	13	13	13	13	13
14	70	27-28	14	14	14	14	14
15	75	29-30	15	15	15	15	15
16	80	31-32	16	16	16	16	16
17	85	33-34	17	17	17	17	17
18	90	35-36	18	18	18	18	18
19	95	37-38	19	19	19	19	19
20	100	39-40	20	20	20	20	20

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FILE IN SECTION 4
Blackpool Teaching Hospitals
NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all cases of Exacerbation of COPD.
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a checklist only. A daily record of updated care **MUST** be recorded in the notes.

Exacerbation of COPD Pathway Checklist

Consultant: _____ **Ward:** _____

Write patient details or affix identification label

Hospital Number: _____
Name: _____
Address: _____

Postcode: _____
Date of Birth: _____
NHS Number: _____

EMERGENCY MANAGEMENT	Check	MEDICAL THERAPY	Check
Investigations ordered: - Chest X-Ray - Oxygen SpO2 - ECG - Sputum sample C&S (if purulent)		Target O2 saturation prescribed and recorded Oxygen saturation monitored every 30 mins until target reached (see over for target guidance) Nebuliser prescribed (consider use of oxygen)	
Baseline Observations taken: HR, BP, Temp, Resp Rate, SpO2, EWS, AVPU		Prednisolone prescribed and administered (see route and dosage over) Appropriate Antibiotics prescribed and administered (Check appropriateness of antibiotic treatment against laboratory culture and sensitivities when available. Refer to guidance over)	
Bloods taken: - ABG's, FBCs, U&E's, CRP Theophylline level (if person is on theophylline), Blood cultures (if pyrexia)			
URGENT SENIOR REVIEW IF ... Any of the following were present: - Cyanosis - Unable to talk full sentences - Confusion/↓GCS - Peri-arrest - Chest Pain	Check		Check
		UNSTABLE NOT RESPONDING TO TREATMENT	
		Aminophylline prescribed and administered if patient not responding to bronchodilators and steroids (see over)	
		BIPAP/NIV considered for unresponsive patients (refer to BIPAP Pathway)	
		Clear care plan (inc. ceiling of care) documented for patients receiving BIPAP/NIV	
		STABLE PATIENT	
		Patient considered for Hospital @ Home	
		Referred to Hospital @ Home/Respiratory Nurses	

VS1038

Approved by the Health Records Committee 13/05/14

Exacerbation of COPD Pathway Checklist

Exacerbation of COPD Quick Reference Guide

Inclusion Criteria for COPD Hospital @ Home Scheme

Medical Criteria	
Diagnosis of COPD with Acute Exacerbation	
Bronchiectatic patient who do not require IV Antibiotics	
Acceptance of mild pneumonias or resolving pneumonias to provide on-going support at home (CURB score 1-2)	
Agreement of GP/Consultant/SPR	
Agreement of COPD Hospital@Home team	
In patient Referral only - Blood Gases – In patient = pH > 7.35 on air PO2 > 7 kPa on air pCO2 < 6.5 kPa on air	
Primary Care Referral only - Blood Gases can be taken within 24 hours via PCAU/ambulatory Care/Community Access if previous exacerbation is within 6 weeks?	
Basic Observations RR < 25 Temp < 38 HR < 110 Systolic BP > 100 mmHg (unless normal for patient)	SpO2 > 90% on air (unless normal for patient)
In patient Referral only - No new CXR or ECG changes. Bloods (FBC, Biochemistry INR)	
Confirmed by Consultant as within acceptable limits for scheme	
Primary Care Referral only – CXR and ECG can be completed within 24 hours if previous exacerbation is within 6 weeks	Bloods (FBC, Biochemistry INR)
No confusion and normal conscious level	
No worsening of peripheral oedema.	
Are co morbidities stable?	
Is the Patient only receiving oral or nebulised treatment for COPD?	
Stable on established home oxygen	
Social Criteria	
Stable on established home oxygen	
Has the patient Telephone Access or Vitaline/HelpLine?	
Is the patient medically fit for early supported discharge?	
Hospital @ Home Contact Details	
Respiratory Nurses - 01253 956972	
If Hospital @ Home required - Bleep 339	
Between 8am-2pm for same day discharge	
Inhaler and Nebuliser Advice	
<ul style="list-style-type: none"> Air driven for patients at risk or known Type 2 respiratory failure Without Salbutamol (Ventolin/Salamol) or Terbutaline (Bricanyl) Inhalers when administering in nebulised form. Without Tiotropium Bromide (Spiriva), Glycopyrronium Bromide (Seebri) or Acclidinium Bromide (Eklira) Inhalers when administering Ipratropium Bromide in nebulised form. Consider stopping nebulisers once patient stabilises and revert to Inhaler Therapies if they are able to effectively use. 	

Oxygen Saturations

- Patients who are known to, or are suspected of retaining CO₂, should be given oxygen to achieve a target saturation in the range 88% to 92%.
- Patients with Type 1 respiratory failure (pCO₂<6.0kPa and pO₂<8kPa) should have oxygen titrated to maintain target oxygen saturations in the range of 94% to 98%.
- Patients with Type 2 respiratory failure (pCO₂>6.0kPa) should have oxygen titrated according to the Trust Policy to maintain oxygen saturations in the range of 88% to 92%.
- Patients with type 2 respiratory failure and an acidosis (pH < 7.35) should be considered for NIV if the acidosis persists despite maximum standard medical management. NIV should normally be commenced within an hour if there is no improvement.

Steroids: Prednisolone

Oral steroids should be considered for all patients with a significant increase in breathlessness, which interferes with daily activities. Prednisolone 30 milligram daily for 7-14 days. Prolonged steroid treatment does not result in greater efficacy and increases the risk of side effects. Patients should be made aware of this. The course may be stopped abruptly without the need for gradual withdrawal in patients not usually taking steroids, however patients that have had recent courses of steroids >2 weeks should have a gradual reduction.

Antibiotics (as per Trust Antibiotic Formulary)

Clinical Condition	Common Pathogen(s)	Antibiotic - 1 st line	2 nd line	Comment
Acute exacerbation COPD (Non-pneumonic LRTI)	<i>Haemophilus influenzae</i> ; <i>Streptococcus pneumoniae</i> ; <i>Moraxella catarrhalis</i> ; Viruses; Occasionally <i>S. aureus</i>	Doxycycline 100mg q12h PO.	Amoxicillin 500mg q8h PO.	Antibiotics ARE indicated in the following: ↑ sputum volume; ↑ purulence of sputum; Dyspnoea.
NO new CXR infiltrates [consolidation]	Occasionally <i>S. aureus</i> (post viral episode).			Review treatment with culture and sensitivity results and switch to targeted antibiotic therapy.
Duration of therapy 5 days	20-40% episodes of non-infective aetiology and up to 30% of viral origin.			

Aminophylline

How to prescribe an aminophylline loading dose

Prescribe on a fluid chart and put a reference on the prescription chart to the fluid prescription.

For patients not already on theophylline/aminophylline therapy, 5mg/kg (max 500mg) in 250ml of normal saline 0.9% or glucose 5% and run over 20-30 minutes maximum rate 25mg/minute

How to prescribe an aminophylline maintenance infusion

Put 500mg of aminophylline in 500ml of normal saline 0.9% or glucose 5% to produce a 1mg/ml concentration. Initially run at a rate of 0.5ml/kg/hr (0.3ml/kg/hr for the elderly) and adjust according to levels. Omit oral theophylline/aminophylline therapy whilst on IV aminophylline. The infusion should be freshly prepared every 24 hours.

Ensure you check daily levels

Omit oral theophyllines if IV commenced

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FILE IN SECTION 4
Blackpool Teaching Hospitals
NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of Fractured Neck of Femur (#NOF).
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a checklist only. A daily record of updated care **MUST** be recorded in the notes.

Fractured Neck of Femur Pathway Checklist

Consultant:

Ward:

Write patient details or affix Identification label

Hospital Number:

Name:

Address:

Postcode:

Date of Birth:

NHS Number:

EMERGENCY MANAGEMENT	Check	ORTHOPAEDIC WARD CARE (Pre-op)	Check	ORTHOPAEDIC WARD CARE (Post-op)	Check
Observations State frequency TPR, B/P, O2 Sats, Conscious level		Assessment undertaken by Nursing Staff (inc. pressure ulcer, falls risk assessment and nutrition screen)		Strict fluid management plan documented	
Pain score assessment. Appropriate analgesia prescribed, administered and monitored (See over)		Medical Assessment. Anaesthesia review (inc. Pre-operation checklist)		Post-op bloods checked	
Initiate VTE assessment and prophylaxis Consider intermittent pneumatic compression / Prescribe Medication (see over)		Continue / complete VTE and dementia screening		Pain relief prescribed and administered (if required)	
Blood tests (FBC, U&E, G&S, Clotting (if on anticoagulants)		Orthogeriatrician review every 24 hours		Physiotherapist sees patient post-op (within 24 hrs of surgery)	
X-Ray Neck of Femur AP and Lateral		Refer to Physiotherapy		Orthogeriatrician review every 24 hours	
IV Fluids (NBM maintained until Ortho Review)		Referral to Early Supported Discharge considered		MDT Meeting undertaken	
Trauma Co-ordinator contacted on BLP 599 OR if Out of Hours BLP 920 to inform Orthopaedics of potential patient and prepare bed		THEATRE CARE (Peri-op)	Check		
Document clear management plan Admit to orthopaedic ward		Operation undertaken with Consultant/ Associate Specialist/Senior Staff supervision			
		Weight Bearing Status documented in post -op notes			

V51052

Approved by the Health Records Committee 26/06/2014

Fractured Neck of Femur Guidelines

Assessment of acute pain in the Emergency Department (adapted from CEM guideline for the management of pain in adults 2010)

No pain	Mild Pain	Moderate	Severe
0	1-3	4-6	7-10
No action	Oral analgesia / IV Paracetamol	Oral analgesia / IV Paracetamol	IV opiates and/or IV / PR Paracetamol Use opiates with caution and titrate accordingly in small increments

CONSIDER FASCIA ILIACA BLOCK UNDER ULTRA SOUND GUIDANCE FOR ALL PATIENTS

Notes for use

- Once the category has been established, appropriate analgesia may be prescribed according to the flow chart
- Patients in severe pain should be transferred to an area where they can receive appropriate intravenous or rectal analgesia within 20 minutes of arrival.
- Patients in moderate pain should be offered oral analgesia at triage /
- In all cases it is important to think of using other non-pharmacological techniques to achieve analgesia, which may include measures such as applying a dressing or immobilising a limb etc.
- Following reassessment if analgesia is still found to be inadequate, stronger /increased dose of analgesics should be used along with the use of nonpharmacological measures
- It is important to re-assess the pain control within 60 minutes in severe and moderate pain have the effectiveness of analgesia re-evaluated within 60 minutes of receiving the first dose of analgesia assessment.

VTE PROPHYLAXIS

Consider VTE Prophylaxis at admission to A&E

- Use of mechanical (FlowTron) VTE prophylaxis preoperatively—Continue with mechanical prophylaxis until mobility is no longer reduced . (NICE CG92)
- All trauma and elective inpatients should have below knee TED stockings in Theatre and post op except for the limb being operated on TED stockings are generally advised until the patient is fully mobile. For Total Hip Replacement patients this is often 5 weeks.
- Prescribe and administer Dalteparin. Dalteparin should not be given less than 12 hours before the spinal anaesthetic.

Assessment of other injuries

Record secondary skeletal survey, including skin damage and haematomas

CHRONIC HEALTH STATUS

- Determine chronic health status including usual mobility and exercise tolerance.
- Discuss with medical colleagues
- Document clear management plan of care.
- Complete dementia assessment

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FILE IN SECTION 4
Blackpool Teaching Hospitals NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of Pneumonia (Community, Hospital, Aspiration)
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a check list only. A daily record of updated care **MUST** be recorded in the notes.

Pneumonia Pathway Checklist

Consultant:

Ward:

Write patient details or affix Identification label

Hospital Number:
Name:
Preferred Name:
Address:
Date of Birth:
NHS Number:

STEP 1 To be completed within 4 hours of arrival	Check	STEP 2 Day 1	Check	STEP 3 Day 2	Check	STEPS 4-10 Day 3-9	STEP 4 Day 3	STEP 5 Day 4	STEP 6 Day 5	STEP 7 Day 6	STEP 8 Day 7	STEP 9 Day 8	STEP 10 Day 9
Measure SaO2		Review Chest X-Ray & Confirm Diagnosis		Review Antibiotics		Review Antibiotics							
Baseline Observations: HR, BP, Temp, Resp Rate, EWS, AVPU		Review Blood Cultures & Act		Review Bloods & Act		Review Bloods & Act							
FBC, CRP, LFT's, U&Es, ABGs		Confirm duration of Antibiotics course		Review Obs & Act		Review Obs & Act							
ECG		Check Urine Pneumococcal & Legionella Antigen Results		Review Blood Cultures & any respiratory tract microbiology results		Review Blood Cultures & any respiratory tract microbiology results							
Blood Cultures		Review Obs & Act		Review Urine for Pneumococcal & Legionella if still outstanding		Review Urine for Pneumococcal & Legionella if still outstanding							
Respiratory tract Specimen		Smoking Assessment & Refer		Smoking Cessation Advice Provided		Consider Discharge							
Chest X-Ray													
Consider Aspiration Pneumonia													
Calculate severity (see overleaf)													
Urine Antigen Tests for CAP (Pneumococcal for CURB score 1-2 Pneumococcal & Legionella for CURB 3 or more)													
Antibiotics (see overleaf)													
MOVE TO STEP 2		MOVE TO STEP 3		MOVE TO STEP 4		REPEAT ABOVE DAILY UNTIL RECOVERY ANY ABNORMAL RESULTS MUST BE REASSESSED							

Pneumonia Quick Reference Guide

Assess Severity:

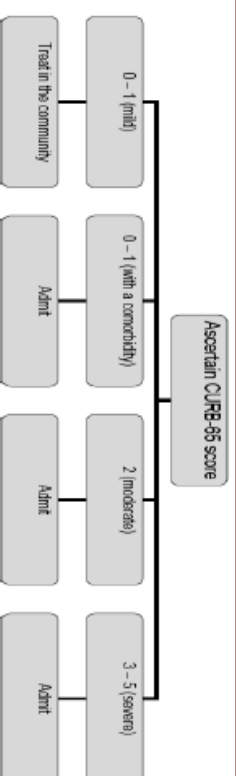
ASSESS SEVERITY OF PATIENT'S PNEUMONIA SCORE

Adverse Prognostic Features (Score 1 for each)

- CONFUSION, NEW (MSQ =8/10)*
- RESPIRATORY RATE = 30/min*
- 65 AGE = 65 years
- UREA > 7mmol/l (if available)
- BP <80mmHg (systolic) or = 60mmHg (diastolic)*

*For HAP severity consider the above marked with an asterix and look for additional prognostic factors:

Co-Morbidity, PaO₂<8kPa on air, Multilobar or bilateral involvement on CXR



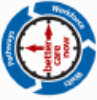
Antimicrobial Therapy for Pneumonia (for full guidance see formulary)

Type	Severity	First Line	Second Line (Penicillin allergy)
Community (If Legionella Urine Antigen Test positive discuss with Resp. Consultant or Microbiologist)	Low Severity (CURB-65 score 0-1 admitted because of social reasons)	Amoxicillin 500mg · Q8h PO for 5 days	Doxycycline 100mg PO Q12h for 5 days
	Moderate Severity (CURB-65 score 2)	Amoxicillin 500mg PO Q8h plus Clarithromycin 500mg PO q12h for 5 days (only if atypicals suspected) If oral route not available: Benzylpenicillin 1.2g IV q6h plus Clarithromycin 500mg IV q12h	Doxycycline 100mg PO Q12h for 5 days If oral route not available: Clarithromycin 500mg IV q12h
Hospital	High Severity (CURB-65 Score 3-5)	Co-amoxiclav 1.2g IV q8h plus Clarithromycin 500mg IV q12h Step down to oral therapy with Co-amoxiclav 625mg PO q8h plus Clarithromycin 500mg PO q12h (Total 7-10 day course) when appropriate	Clarithromycin 500mg IV q12h plus Vancomycin 1g IV q12h
	Non-Severe—Early Onset (2-5d of hospital admission)	Amoxicillin 2g q8h IV Plus Gentamicin 5mg/kg IV One Stat dose. for 7 days	Discuss with Microbiologist
	Non-Severe—Late Onset (>5d of hospital admission) Severe—No Previous Antibiotics	Co-amoxiclav 1.2g q8h IV for 7 days Piperacillin-tazobactam 4.5g q8h IV for 7 days	Discuss with Microbiologist Discuss with Microbiologist
Aspiration	Severe—Previous Antibiotic with high risk of CDI	Piperacillin-tazobactam 4.5g q8h IV for 7 days	Discuss with Microbiologist
	Admission <5 days Admission >5 days	Amoxicillin 1g q8h IV plus Metronidazole 500mg q8h IV Or Clindamycin 600mg q6h IV if Penicillin allergy for 5 days Treat as HAP	Discuss with Microbiologist Treat as HAP

This checklist should be supported by a clear medical plan in the patients notes which should be reviewed and updated daily. This will include checking obs, sputum, bloods and antibiotics. Any abnormalities should be acted upon and a clear plan of care documented in the patients notes clearly identifying the day of the pathway.



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FILE IN SECTION 4
Blackpool Teaching Hospitals
NHS Foundation Trust

CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of Sepsis, Neutropenic Sepsis, Severe Sepsis or Septic Shock in Adults.
2. The Checklist should be attached inside section 4 of the patient's notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a check list only. A daily record of updated care MUST be recorded in the notes.

Sepsis in Adults (including Neutropenic and Obstetric patients) Pathway Checklist

Consultant:

Ward:

Write patient details or affix identification label

Hospital Number:
Name:
Preferred Name:
Address:
Date of Birth:
NHS Number:

To be completed within 1st hour of admission or demonstration of initial symptoms/signs of sepsis as per pathway	Check
Maintain target oxygen saturations as per Trust guidelines	
Obtain Bloods (see over)	
Blood Cultures obtained ASEPTICALLY and prior to antibiotic administration	
Antibiotics administered within 1 hour: (broad spectrum per formulary guide)	
Fluid Challenge as per Sepsis pathway	
Address source control	
Ensure senior review (Registrar or Consultant)	
Seek critical care opinion if concerns (Consultant/Registrar)	
Seek microbiologists, and haematologist or oncologists opinion (NEUTROPENIC PATIENTS)	
Seek Obstetrician opinion (OBSTETRIC PATIENTS)	

To be completed within 2-3 hours of admission or demonstration of initial symptoms/signs of sepsis as per pathway	Check
Maintain observations at 30min intervals and act	
Review blood results and act	
Catheterise	
Monitor fluid input and urine output and act	
Diagnosis made and documented	
Management Plan documented	
VTE prophylaxis (OBSTETRIC PATIENTS)	
Consider Delivery or ERPC (OBSTETRIC PATIENTS)	

Severe Sepsis (no shock) To be completed within hours 3-6 of admission or demonstration of initial symptoms/signs of sepsis as per pathway	Check
Hourly observations and act	
Monitor fluid input and urine output and act	
Review blood results and act	
Refer Critical Care Outreach/ART	
Medical review at 6 hours	
Septic Shock To be completed within hours 3-6 of admission or demonstration of initial symptoms/signs of sepsis as per pathway	Check
Refer Critical Care (Consultant or Registrar)	
Ceiling of treatment agreed	
Fluid resuscitation	
Measure Central Venous Pressure (CVP) and Central Venous Oxygen Saturation (ScVO2)	
Achieve CVP of 8 to 12mm/Hg.	
Achieve ScVO2 > 70%	
Apply Vasopressors	
Re-check lactate if initially high > 2mmol/L	

Sepsis in Adults Quick Reference Guide

Sepsis Investigations		Sepsis Fluid Challenge	
<ul style="list-style-type: none"> - Blood cultures: take at least one set plus FBC, U&E's, LFT's, CRP, INR, APTT, Fibrinogen, Grp/Save (using CyberLab Sepsis order set). - Check Serum Lactate (arterial or venous). - ABG, if patient requiring >40% oxygen to maintained target saturation or if hypotension/raised lactate. 		<ul style="list-style-type: none"> - Give fluid challenge in the event of Hypotension (systolic <90mmHg or >40mmHg fall from baseline or MAP <65mmHg) and/or lactate >4 mmol/L: Deliver an initial bolus of up to 30mls/kg of Plasma-lyte (or colloid equivalent) in the 1st hour intravenously (some patients may require greater volumes). - Fluids must be titrated to BP response. Consider maintenance fluids as required. Caution with fluid load > 30mls / kg in patients with significant heart disease. 	

IN ANY PATIENT WITH SUSPECTED SEPSIS, ANTIBIOTICS WITHIN THE FIRST HOUR ARE A MISSION CRITICAL STEP

Antimicrobial Therapy for Sepsis (for full guidance see formulary)			
Clinical Condition	Pathogen(s)	First Line	Second Line
<p>Septicaemia from UNKNOWN origin (non-neutropenic patient)</p> <p>Diagnosed –organ dysfunction with ≥ 2 of the following: - WCC <4 or > 12 x 10⁹/L - Temp <36°C or >38°C - Heart rate >90bpm - Respiratory rate >20/min or PaCO₂ <4.3kPa</p>	Multiple pathogens.	<p>Amoxicillin 2g q8h IV plus Gentamicin 5mg/kg q24h IV plus Metronidazole 500mg q8h IV [if intrabdominal sepsis suspected]. MRSA/MSSA colonised: Replace Amoxicillin with Flucloxacillin 2g q6h IV (MSSA) or Vancomycin 1g q12h IV (MRSA).</p>	<p>Discuss with Consultant Microbiologist. Gentamicin*: 5mg/ kg but for elderly patients or with mild/moderate renal impairment, may require 3mg/ kg or shorter duration treatment.</p>
<p>Line-associated Septicaemia (peripheral and central cannulae) and Tunnel track Infections (Hickman line) Duration of therapy - 2 weeks</p>	Staphylococcus aureus; Hickman/ long lines may have Enterobacteriaceae.	<p>Vancomycin 1g q12h IV. Add stat dose or once daily dose of Gentamicin 5mg/kg while awaiting culture results in patients with central line. Use of Gentamicin post 48h must be discussed with Microbiologist.</p>	<p>Discuss with Microbiologist</p>
<p>Treatment of fever or sepsis in Neutropenic patients</p> <p>Fever of 38.3°C or more on one occasion, or 38.0°C or more sustained for 1 hour in a patient at risk of neutropenia e.g. post chemotherapy. Never wait for results before starting IV antibiotics.</p>	Gram Positive pathogens; Gram negative pathogens which can lead to shock, multi-organ failure and death.	<p>Piperacillin-tazobactam 4.5g q6h IV plus Gentamicin* 5mg/kg q24h IV In renal impairment, use one single dose of Gentamicin only. Stop Gentamicin at 48 hours unless otherwise instructed.</p>	<p>Meropenem 1g IV 8 hourly Where previous penicillin anaphylaxis, discuss regime with Microbiologist. *Gentamicin*: 5mg/ kg but for elderly patients or with mild/ moderate renal impairment, may require 3mg/ kg or shorter duration treatment.</p>
<p>Obstetric Patients 20 wks Pregnant OR 6 wks Post Partum</p>		<p>Pregnant: Co-amoxiclav +/- stat dose of Gentamicin IV (ideal body weight) Post Partum (Not Breast Feeding): Amoxicillin 2g q8h IV plus Gentamicin 5mg/kg q24h IV plus Metronidazole 500mg q8h IV [if intrabdominal sepsis suspected]. Post Partum (Breast Feeding): Co-amoxiclav + stat dose of Gentamicin (ideal body weight)</p>	<p>Discuss with Microbiologist</p>

This checklist should be supported by a clear medical plan in the patients notes which should be reviewed and updated daily.
 Any abnormalities should be acted upon and a clear plan of care documented in the patients notes clearly identifying the day of the pathway.



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CONTACT THE CLINICAL IMPROVEMENT FACILITATORS ON BLP 346 OR 351 TO NOTIFY ABOUT THIS PATIENT

1. Apply this Checklist to all new cases of suspected stroke
2. The Checklist should be attached inside section 4 of the patients notes via the designated punched holes so that it protrudes out of the top of the notes for easy identification.
3. This is a check list only. A daily record of updated care **MUST** be recorded in the notes.

Stroke Pathway Checklist

Consultant: _____

Ward: _____

Write patient details or affix identification label

Hospital Number:
Name:
Preferred Name:
Address:

Date of Birth:
NHS Number:

STEP 1 To be completed prior to Acute Stroke Unit (ASU) Admission	Timescale	Check	STEP 2 To be completed on the Acute Stroke Unit (ASU)	Timescale	Check
NWAS Pre-alert A&E with stroke patient			Patient thrombolysed (if within 4.5hrs of onset)	WITHIN 1 HOUR	
ROSIER completed	WITHIN 15 MINS		Screened for swallowing disorder	WITHIN 4 HRS OF ASU ADMISSION	
Stroke team informed on BLP 547			MUST screening	WITHIN 6 HRS OF ASU ADMISSION	
Time of onset recorded in notes			Antiplatelet therapy	WITHIN 24 HRS OF ASU ADMISSION	
Patient assessed for thrombolysis			Occupational Therapist/ Physiotherapist assessment	WITHIN 72 HRS OF ASU ADMISSION	
Bloods taken: FBC, U&Es, INR, Glucose			SLT swallowing assessment (only if failed the screening)	WITHIN 72 HRS OF ASU ADMISSION	
ECG Performed					
CT Brain Scan ordered					
CT Scan performed	WITHIN 1 HR (Thrombolysis) WITHIN 12 HRS (non Thrombolysis)				
Transfer to Acute Stroke Unit	WITHIN 1 HR (Thrombolysis) WITHIN 4 HRS (non Thrombolysis)				
MOVE TO STEP 2					

Stroke Quick Reference Guide

Signs/Symptoms

ACT F.A.S.T

- FACE:** Has their face fallen on one side? Can they smile?
- ARMS:** Can they raise both arms and keep them there?
- SPEECH:** Is their speech slurred?
- TIME:** Time to consider stroke if you see any single one of these signs.

ROSIER - Recognition Of Stroke In the Emergency Room

1. Has there been loss of consciousness or temporary loss of consciousness due to a drop in blood pressure (syncope)?
If yes score = -1, if no score = 0
2. Has there been seizure activity?
If yes score = -1, if no score = 0
3. Is there a NEW onset of the following symptoms (or on waking from sleep):
 - Asymmetric facial weakness? If yes score = +1, if no score = 0
 - Asymmetric leg weakness? If yes score = +1, if no score = 0
 - Asymmetric arm weakness? If yes score = +1, if no score = 0
 - Speech disturbance? If yes score = +1, if no score = 0
 - Visual field defect? If yes score = +1, if no score = 0

The total score will range between -2 and +5.

If the total score is between +1 and +5, then the patient should be referred to the hospital stroke team and/or admitted to the hospital stroke unit.

Investigations

- Bloods:** - FBC
- U&Es
- INR
- Glucose
- EKG**
- CT Brain Scan**

Please be aware that the ROSIER tool will not identify pure posterior circulation stroke.
Consider the following signs/symptoms and refer to the stroke team if appropriate:

- Acute Diplopia
- Acute Vertigo
- Acute Confusion in a previously normal person (check for hemianopia)
- Sudden loss of balance

Ensure that the stroke team are informed of patient as soon as possible on BLP 547

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