

Pathway for the Care of Infants with Prolonged Jaundice

WHEN TO USE THIS PATHWAY:

Neonatal patients who remain jaundiced after 14 days of age in term babies
(or 21 days of age in preterm)

WHEN TO STOP THIS PATHWAY:

This pathway is complete following the decision by consultant to discharge

NAME:

DATE OF BIRTH:

HOSPITAL No:

ADDRESS & POSTCODE:

CONSULTANT ON TAKE:

NHS NO:

**Adults accompanying the child:
Name & Relationship:**

Two Emergency contact Numbers:
(Include names, telephone numbers, and relationship to child)

1.

2.

GENERAL PRACTITIONER (Name and Address)

DATE & TIME OF ADMISSION:

REFERRAL ROUTE: (ask details of referrer including contact details).

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Date & Time of medical assessment**Demographics**ETHNICITY: (please circle)

WHITE	White british	White irish	Traveller of irish heritage	Gypsy / roma	Any other white background
Black or black British	Caribbean	African	Any other black background		
Asian or Asian British	Indian	Pakistani	Bangladeshi	Any other Asian background	
Mixed / dual Background	White & Black Carribean	White & Black African	White & Asian	Any other ethnic group	
Chinese and other	Chinese	Any other ethnic group			

Is English the child's first language: YES ☐ NO ☐ (please document language spoken)Is an interpreter/signer required YES ☐ NO ☐Does the child / young person have a disability NO ☐ YES ☐RELIGION (please circle) Roman catholic C of E Muslim Hindu Sikh Buddhist
Other.....Do you wish to see a religious leader YES ☐ NO ☐**FAMILY / SOCIAL HISTORY**

Who does the child live with? (Please state whether birth parents/foster parents or other)

Details of parents / main carers living with the child (If mother or father does not live with the child please enter details at bottom – details here **must** be who actually lives with the child)1. **Mother / Main Carer :-** (Name, DOB, relationship, contact numbers)2. **Father / Partner / Main Carer:-** (Name, DOB, relationship, contact numbers)**Who has Parental responsibility?** (Name, Age, Address, Contact Numbers if different from above)**Document Siblings details:** (Include names, DOBs, address of all siblings; half / step siblings)

1.

3.

2.

4.

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Details of birth mother / father if not resident with child (Name, DOB, address, contact No)

Details of Residential Home Manager (Name, Address, Contact numbers)

With whom does the child live 7 days a week if a joint custody arrangement?

(Document details of all household members, i.e. name, DOB, relationship and addresses if child lives at different addresses)

SUPPORT SERVICES WORKING WITH THE CHILD / YOUNG PERSON

(Name, Address, Contact Number)

Other Doctors / Specialists

Health Visitor / School Nurse (Clinic Base)

School / College / Nursery

Midwife (if under 28 days)

Other (document)

SOCIAL CARE INVOLVEMENT: Ask the child or parent(s)

Do you presently have a social worker?

YES / NO

If YES, record name, base, contact number and details

Have you previously had a social worker for yourself or this child or any other child in the family?

YES / NO

If YES, record name, base, contact number and details

Is your child subject to, or has been subject to, a child protection plan?

YES / NO

Is your child subject to, or has been subject to, a CAF?

YES / NO

If **YES** is answered to the above please document more details

ADDITIONAL INFORMATION: Consider -Family functioning & wellbeing, bereavement, violence, criminality, antisocial /abusive behaviour. Culture / Race / Language issues. Size and composition of household. Formal / informal support networks from extended family / others.

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

SECTION A - MEDICAL ASSESSMENT

PC: Presenting complaint and duration

HPC: History of presenting complaint

Current age:

Gestation:

Mode of delivery:

Birth weight:

Day of onset of jaundice:

Is jaundice improving ☐ Same ☐ Worsening ☐

Stool colour:

Urine colour:

Feeding (Method/ any concerns): Breast ☐ Bottle ☐ Mixed P ☐ TPN ☐

Feeding volume/Frequency:

Vomiting:

Current weight:

Mother's blood group:

Baby's blood group (if known):

Any other presenting history questions:

Family history – Genogram

Ethnicity

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

CLINICAL EXAMINATION

General Condition / Visual Signs (Look for any signs of dysmorphism/pallor/haematomas)

Respiratory (Particularly looking for any signs of distress)

CVS (looking for any heart murmurs)

Abdomen / genitalia (Looking for any liver/spleen Micro penis and testes and document sizes).

ENT (Look for midline defect, Cleft Palate)

Injuries / Skin: (Document- rashes, discolouration, bruising, lacerations etc - Use a body map if required).

Growth Parameters:
(Plot growth parameters including OFC if < 1 year)

Provisional Diagnosis:

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Checklist (Please ensure all investigations are completed before patient is discharged)

Has the patient:

1. Had all relevant history questions asked as detailed in this pathway ☐
2. Had an examination as per pathway guidance ☐
3. Had blood tests sent for
 - Split bilirubin ☐
 - Blood group and DCT/DAT ☐
 - Full blood count including reticulocyte count and film ☐
(Please note that reticulocyte count will need to be written on form as it is not done as part as a normal FBC)
 - Liver function test (Particularly ALT and Alk Phosphatase) ☐
 - Thyroid function tests ☐
4. Had urine test sent for Microscopy , culture & sensitivity ☐
5. Had urine test sent for REDUCING SUBSTANCES ☐
6. Been given a leaflet which has been explained about the assessment and observation of prolonged jaundice. ☐

Patient can now be discharged home but remember it is the responsibility of the clinician who has seen the patient to chase these results and act upon them.

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Investigation of babies with prolonged jaundice aged 14 days old (or 21 days old if preterm)

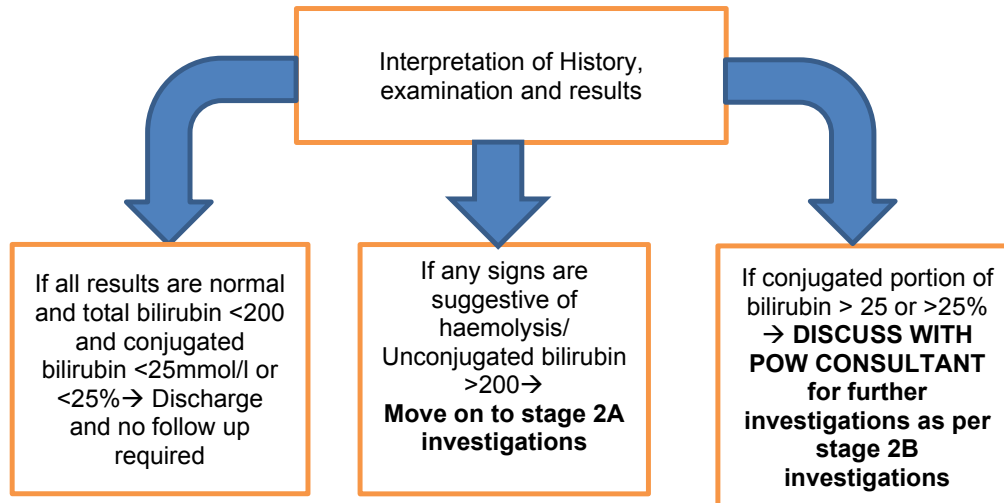
Community Actions

Community midwives to perform a total and split bilirubin test (see Appendix 1 – Prolonged Jaundice Telephone Triage and Community Actions Flowchart on pages 15 and 16 of this document)

- If the total bilirubin is less than 200 micromoles/litre and the conjugated bilirubin is less than 25% of the total/less than 25 micromoles/litre → No need for further investigation. Reassure parents & discharge
- If the total bilirubin is higher than 200 micromoles/litre and the conjugated result is less than 25 micromoles/litre AND/OR if the conjugated bilirubin is greater than 25% of the total bilirubin or greater than 25 micromoles/litre, regardless of total bilirubin result → Refer to Whiston Hospital via switchboard

HOSPITAL ACTIONS

Flow chart



*If there are any other concerns in either the results or the history then always consider sepsis, metabolic causes or haemolysis.

*Prolonged neonatal unconjugated hyperbilirubinaemia of >200 (>14 days old) with negative results (i.e. no haemolysis or metabolic disorder) and not on breast feeds may be suggestive of Crigler –Najjar syndrome.

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Section B**Stage 2A investigations****SECOND LINE INVESTIGATIONS for UNCONJUGATED HYPERBILIRUBINAEMIA****If unconjugated hyperbilirubinaemia. (>200), DCT positive or any suspicion of haemolytic abnormality.**

Investigation	Tick if required	Signature & date completed	Investigation	Tick if required	Signature & date completed
Total & conjugated bilirubin			Galactose-1-phosphate uridyl transferaseN (Gal-P-Uridyl-Transferase)		
G6PD (Low threshold to perform this in Asian & Mediterranean origin)			9 am Cortisol (± short synacthen test)		
C-Reactive Protein (CRP)			Urine for organic and amino acids (if not already done)		
Urine Clinitest for reducing substances (if not already done)			Urine for Microscopy culture and sensitivity (if not already done)		
Check Newborn Heel Prick screening result for cystic fibrosis (Guthrie test)					

Outcome Discharge Yes/No

Further investigations – Yes/No please state what.

Discharged by whom: please sign and print name below

Signature.....

Name (print).....

Ensure that a discharge letter is completed and that that responsible consultant is appropriately updated.

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Tick box once completed ☐**Results**

Investigation	Result date	Result date	Result date	Reference range
FBC				(5.0-18.0)
<i>WBC</i>				
<i>RBC</i>				(2.80-5.30)
<i>Hb</i>				(100-170)
<i>Haematocrit</i>				(0.310-0.550)
<i>MCV</i>				(85.0-105.0)
<i>MCH</i>				(27.0-36.0)
<i>MCHC</i>				(310-360)
<i>RDW</i>				(11.6-14.6)
<i>Platelets</i>				(150-450)
<i>Neuts</i>				(2.0 – 6.0)
<i>Lymphs</i>				(2.2-9.8)
<i>Monos</i>				(0.1-1.0)
<i>Eosos</i>				(0.0-0.8)
<i>Basos</i>				(0.0-0.2)
<u>Retics</u>				(0.1-2.6)
<i>Reticulocyte count</i>				
<i>Absolute</i>				(10-100)
<u>LFT</u>				(0-49)
<i>ALT</i>				
<i>ALP</i>				(70-380)
<i>Total billirubin</i>				(0-20)
<i>Albumin</i>				(30-45)
<u>Split Billi</u>				(0-20)
<i>Total</i>				
<i>Conjugated</i>				
<i>% Conj/total</i>				
<u>TFT</u>				(0.3-5.00)
<i>TSH</i>				
<i>T4</i>				(11.0-22.0)
Blood group				
DAT				
Blood film				
Urine Micro, C&S				

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Once results are back and documented in this pathway, discuss them with the consultant who is on hot week POW Consultant.

Final Diagnosis :

Discharged: Yes ☐ No ☐

If No, please state below what further investigations are needed. If second stage, please go to the next page

Discharged by:

Sign:

Print:

Date:

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Stage 2B investigations

IF CONJUGATED HYPERBILIRUBINEMIA (>25 OR >25 % OF THE TOTAL BILIRUBIN)

Investigation	Tick if required	Signature & date completed	Investigation	Tick if required	Signature & date completed
USS of liver			If not screened for CF DNA (Sweat test may be considered later)		
Hida scan of liver (Arrange with AHCH radiology) *			α – 1- antitrypsin levels and phenotype.		
IgM for TORCH, Hepatitis A B C and urine for CMV and toxoplasmosis			Galactose -1 PD uridyl transferase		
TSH and 9 am cortisol (If not already done)			Plasma amino acids		
FBC , LFT, U and E, coagulation, total and split bilirubin, bone profile, bicarbonate and clotting (If			Urine for amino acids and organic acids		

*(Most cases would require priming with phenobarbitone, but if in doubt, discuss with Alder hey gastro consultant regarding priming with phenobarbitone for 3-5 days prior to scan 5mg/kg/day. Delayed films of up to 24 hours are also often required and may need to have a prior discussion with radiologist.

Outcome

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Stage 3 assessment (Specialist investigations in prolonged jaundice and must always be discussed with consultant & Paediatric Liver Unit Birmingham Children's Hospital or Leeds General Hospital)

Investigation	Tick if required	Signature & date completed	Investigation	Tick if required	Signature & date completed
Liver biopsy (Cholestatic jaundice)			Chromosomes		
Cholangiograms (percutaneous or surgical)			White cell enzymes		
Very long chain fatty acids.			Pyruvate Kinase Enzyme levels if haemolytic jaundice and other tests		
Bile acids in plasma and urine			Opthalmological opinion		
Liver Biopsy					

Outcome

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Medical notes

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

DISCHARGE PLANNING - FROM A&E / CHOBS

ADMISSION REQUIRED

YES / NO

Ward:

If admission is required Complete Section C – NURSING ASSESSMENT

DISCHARGE From A&E / CHOBS

YES / NO

Does the child require a discharge planning meeting?

YES / NO

Parents / carers agree to discharge

YES / NO

Discharged to: (document discharge address and contact telephone upon discharge)

Discharged to CCNT

YES / NO (If yes complete CCNT referral form)

Discharged with contact advice: - 24 hour contact ☐ 48 hour contact ☐

Date and Time contact expires (state)

Agencies notified of discharge (document date and details of person informed)

Paediatric Liaison ☐ Health Visitor ☐ Social Services ☐ School ☐

Clearly document advice given on discharge including advice leaflets:

Follow up plans required: - (clearly document time and reason for appointment e.g. OPD, dressing clinic, PDU etc.)

Date and Time of Discharge

Name of nurse discharging the child

Name (Print clearly)

Role / Grade

Date and Time

Signature

Name:

D.O.B:

Unit No:

NHS No:

Appendix 1 – Prolonged Jaundice Telephone Triage and Community Actions Flowchart

PROLONGED JAUNDICE TELEPHONE CONTACT SHEET.

DATE OF CONTACT:

NAME OF MIDWIFE/REFERRER:

BABY NAME:

HOME ADDRESS:

PARENTS TELPHONE NUMBER:

DOB:

HOSPITAL NUMBER:

NHS NUMBER:

HISTORY FROM REFERRING MIDWIFE:

GESTATION:

BIRTH HISTORY:

FEEDING METHOD:

STOOL COLOUR:

URINE COLOUR:

MOST RECENT SBR (IF AVAILABLE):

ASK MIDWIFE TO PERFORM SPLIT BILIRUBIN:

IF MIDWIFE COMPLETING SPLIT BILIRUBIN THEN APNP MUST CHASE AND INTERPRET RESULTS BE AWARE HALTON BABIES WILL NOT BE ABLE TO HAVE SPLIT BILIRUBIN IN THE COMMUNITY.

RESULTS:

TOTAL BILIRUBIN:

CONJUGATED BILIRUBIN:

Delete as appropriate *REQUIRES IST LINE/NO FURTHER ACTION

Date of appointment for PJ screen:

Parents contacted and updated:

Name:

D.O.B:

Unit No:

NHS No:

Community Actions

Investigation of babies who appear jaundiced at 14 days of age (or 21 days old if preterm)

