Management of Fetal Renal Tract Dilation: **Antenatal** v1.0 Feb 2017

First US Assessment

16-28 weeks	≥28weeks

Visible dilation in the first trimester is always abnormal

AP RPD < 4mm	AP RPD <7mm
N +/- central calyceal dilation (no peripheral dilation) No additional findings	

AP RPD 4mm to <7mm	AP RPD 7mm to <10 mm
A1 +/- central calyceal dilation (no peripheral dilation) No additional findings	

AP RPD ≥7 mm	AP RPD ≥10 mm
A2 +/- central calyceal dilation (no peripheral dilation) No additional findings	

AP RPD ≥4mm	AP RPD ≥7mm
A3 PLUS any one or more of: Peripheral calyceal dilation Abnormal parenchymal thickness Abnormal parenchymal appearance Dilated ureters Abnormal bladder wall or ureterocele Unexplained oligohydramnios	

Dilated duplex or anomalous kidneys, cystic kidney disease or other abnormal parenchyma without dilation

N **NORMAL** No follow up

A1 **LOW RISK**

A2 **INTERMEDIATE RISK** Maternal GP registration Fetal Medicine referral if AP RPD ≥10 mm at any stage*

A3 **HIGH RISK** Fetal Medicine referral* Maternal GP registration

EXIT PROTOCOL Fetal medicine referral*

Follow-up US Assessment

Repeat US at or near 32 weeks . Repeat is not needed if dilation was first detected after 28 weeks.

Repeat US at or near 32 weeks / in 4 – 6 weeks (whichever is later) or as determined by Fetal Medicine*

Follow up is mandatory but should be determined by Fetal Medicine*

Reassess using same criteria as First US Assessment pathway ≥28weeks

N **NORMAL** No follow up

A1 **LOW RISK** Maternal and Neonatal GP registration **Initial Postnatal Ultrasound:** 1-3 months

A2 **INTERMEDIATE RISK** Fetal Medicine referral* Maternal and Neonatal GP registration **Initial Postnatal Ultrasound:** Day 7 and again at 1-3 months

A3 **HIGH RISK** Fetal Medicine referral* Maternal and Neonatal GP registration Consider antenatal paediatric specialist services referral **Minimum Postnatal Ultrasound:** US at day 7 and again at 1-3 months Additional US within 24-48 hours after birth if suspected bladder outlet obstruction, oligohydramnios , abnormal parenchyma or worrying clinical presentation such as poor urine output. Clinical assessment drives urgency. Consider catheter placement if US delayed or concern about bladder outflow obstruction.

***or appropriate local equivalent**

Management of Fetal Renal Tract Dilation: **Postnatal** v1.0 Feb 2017

First US Assessment

Timing as per the Antenatal Pathway

Scans performed before 7 days of age may falsely underestimate dilatation and should be repeated after 7 days

N — **AP RPD < 10mm**

+/- central calyceal dilation (no peripheral dilation)

No additional findings

P1 — **AP RPD 10 to < 15mm**

+/- central calyceal dilation (no peripheral dilation)

No additional findings

P2 — **AP RPD ≥15mm**

+/- central calyceal dilation (no peripheral dilation)

No additional findings

P2 — **AP RPD < 15mm**

With peripheral calyceal dilation and/or dilated ureters

No additional findings

P3 — **AP RPD ≥15mm**

With peripheral calyceal dilation and/or dilated ureters

P3 — **<u>Any</u> AP RPD**

PLUS Any one or more of:

Abnormal parenchymal thickness

Abnormal parenchymal appearance

Abnormal bladder wall or ureterocele

Anomalous kidneys, cystic kidney disease, symptomatic child or urinary tract infections

All children with abnormal renal scans require registration with a GP

N — **NORMAL**

Normal scan before 1 month age:

Repeat in 3 months

Normal scan after 1 month age:

EXIT PROTOCOL: No further follow-up

P1 — **LOW RISK**

Low risk before 1 month age:

Repeat in 3 months and at 12 months

Low risk after 1 month age:

Needs repeat US and GP assessment at 12 months of age

P2 — **INTERMEDIATE RISK**

Needs specialist input

P3 — **HIGH RISK**

Needs urgent specialist input

EXIT PROTOCOL

Referral or other management as appropriate

US assessment at 12 months

Use same criteria as first US assessment

If normal at 12 months then EXIT PROTOCOL

No further follow up

If remains P1 at 12 months old then EXIT PROTOCOL

No further follow up

If P2 or P3 at 12 months then follow appropriate pathway

1. Referral to local outpatient Specialist Paediatric Service

2. Repeat US 1 – 3 months

At discretion of responsible clinician, consider:

- **Prophylactic antibiotics**
- **MCU if bilaterally dilated ureters or calyces**
- **Mag3 or DTPA after 3 months age if suspicion of obstruction**

1. Urgent referral to local Specialist Paediatric Service

2. Repeat US as determined by specialist

At discretion of responsible clinician, consider:

- **Catheter placement if concern about bladder outlet obstruction**
- **Prophylactic antibiotics**
- **MCU for assessment of reflux or bladder outlet obstruction**
- **Mag3 or DTPA after 3 months age if suspicion of obstruction**

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EXIT PROTOCOL Fetal medicine referral*

Follow-up US Assessment

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Repeat US at or near 32 weeks / in 4 – 6 weeks (whichever is later) or as determined by Fetal Medicine*

Follow up is mandatory but should be determined by Fetal Medicine*

Reassess using same criteria as First US Assessment pathway ≥28weeks

N **NORMAL** No follow up

A1 **LOW RISK** Maternal and Neonatal GP registration **Initial Postnatal Ultrasound:** 1-3 months

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No additional findings

P1 — **AP RPD 10 to < 15mm**
+/- central calyceal dilation (no peripheral dilation)
No additional findings

P2 — **AP RPD ≥15mm**
+/- central calyceal dilation (no peripheral dilation)
No additional findings

P2 — **AP RPD < 15mm**
With peripheral calyceal dilation and/or dilated ureters
No additional findings

P3 — **AP RPD ≥15mm**
With peripheral calyceal dilation and/or dilated ureters

P3 — **Any AP RPD**
PLUS Any one or more of:
Abnormal parenchymal thickness
Abnormal parenchymal appearance
Abnormal bladder wall or ureterocele

Anomalous kidneys, cystic kidney disease, symptomatic child or urinary tract infections → **EXIT PROTOCOL**
Referral or other management as appropriate

All children with abnormal renal scans require registration with a GP

N — NORMAL
Normal scan before 1 month age:
Repeat in 3 months
Normal scan after 1 month age:
EXIT PROTOCOL: No further follow-up

P1 — LOW RISK
Low risk before 1 month age:
Repeat in 3 months and at 12 months
Low risk after 1 month age:
Needs repeat US and GP assessment at 12 months of age

P2 — INTERMEDIATE RISK
Needs specialist input

P3 — HIGH RISK
Needs urgent specialist input

US assessment at 12 months

Use same criteria as first US assessment

If normal at 12 months then EXIT PROTOCOL
No further follow up

If remains P1 at 12 months old then EXIT PROTOCOL
No further follow up

If P2 or P3 at 12 months then follow appropriate pathway

1. Referral to local outpatient Specialist Paediatric Service
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