

Fetal Renal Tract Dilation – Management of Infants

Procedure Responsibilities and Authorisation

Department Responsible for Procedure	Neonatal Intensive Care Unit
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Document Facilitator Title	MQSP Midwife
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Document Owner Title	Head of Department - NICU
Target Audience	Nurse practitioners, Clinical Nurse Specialists, Registrars, Senior Medical Officer, Senior House officers, Midwives and LMC

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Procedure Review History

Version	Updated by	Date Updated	Summary of Changes
1	David Bouchier		
2	David Bouchier	April 2015	Due for review
3	Phil Weston	Oct 2019	Due for review
4	Sarah Power	March 2022	New process
4.1	Sarah Power	December 2022	Added in referral from responsible clinician which may be by NNT or LMC

Fetal Renal Tract Dilation – Management of Infants

1 Overview

1.1 Purpose

To outline the process of referral for babies born with an antenatal diagnosis of A2 Renal Pelvic Dilation (RPD) or A3 RPD and subsequent investigation and management

1.2 Scope

Te Whatu Ora Waikato staff working in the Women and Children’s directorate, including lead maternity carers (LMC)

1.3 Patient group

Babies and infants diagnosed antenatally with renal pelvic dilation

1.4 Definitions

AP	Anterior posterior
CNS	Clinical nurse specialist
GP	General practitioner
LMC	Lead maternity carer
RPD	Renal pelvic dilation
UTD	Urinary Tract Dilation
NNT	Neonatal Team

2 Clinical Management

2.1 Roles and Responsibilities

- Nurse Practitioners, Clinical Nurse Specialists, Registrars, Senior Medical Officer, Senior House Officers, LMCs to follow this referral and assessment pathway.
- Refer to the national “Management of Fetal Renal Tract Dilation” guideline <https://www.starship.org.nz/guidelines/renal-national-antenatal-renal-dilation-guideline/>

2.2 Procedure

- 1 Antenatal detection of A2 RPD or A3 RPD will have a postnatal care plan from Maternal Fetal Medicine to guide timing of postnatal ultrasounds.
- 2 Newborns with antenatal diagnosis of A2 or A3 RPD will be referred by the the responsible clinician, either LMC or NNT acutely by phone (0600-1800) to the Paediatric Surgical Registrar if they **require an ultrasound scan within 48 hours** of birth. The responsible clinician, either LMC or NNT must follow up the acute phone referral with a written referral to the service.

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- 3 Newborns with antenatal diagnosis of A2 or A3 RPD that **do not require a scan** prior to 7 days will be referred within 48 hours or as soon after birth as possible/practical by the responsible clinician, either LMC or NNT to the paediatric surgical service who arranges ultrasounds scans and appointments in line with the national recommendations (see Appendix A).
- 4 For all A3 and A2 RPD LMC sends a renal referral letter to GP
- 5 Paediatric Surgical Registrar/ CNS for Paediatric Surgery requests a copy of the postnatal scan report to their service, ensure that the name of the on-call Surgical Consultant is recorded and that a copy is also directed to that Surgeon.
- 6 Antibiotic prophylaxis (e.g. Cefaclor 5mg/kg/nocte) will be considered if vesicoureteric reflux is a possibility – discuss with Paediatric Surgical SMO. Continue with prophylaxis until vesicoureteric reflux excluded.

Note: Refer to Appendix A: *Management of Fetal Renal Tract Dilation: Antenatal* v1.0 Feb 2017 for definitions of A1, A2, and A3 RPD

3 Audit

3.1 Indicators

- Scans are ordered according to the national guideline - see Appendix A
- All infants with an antenatal diagnosis of A2 or A3 RPD are assessed and followed up by the Paediatric Surgical Service.

4 Evidence base

4.1 References

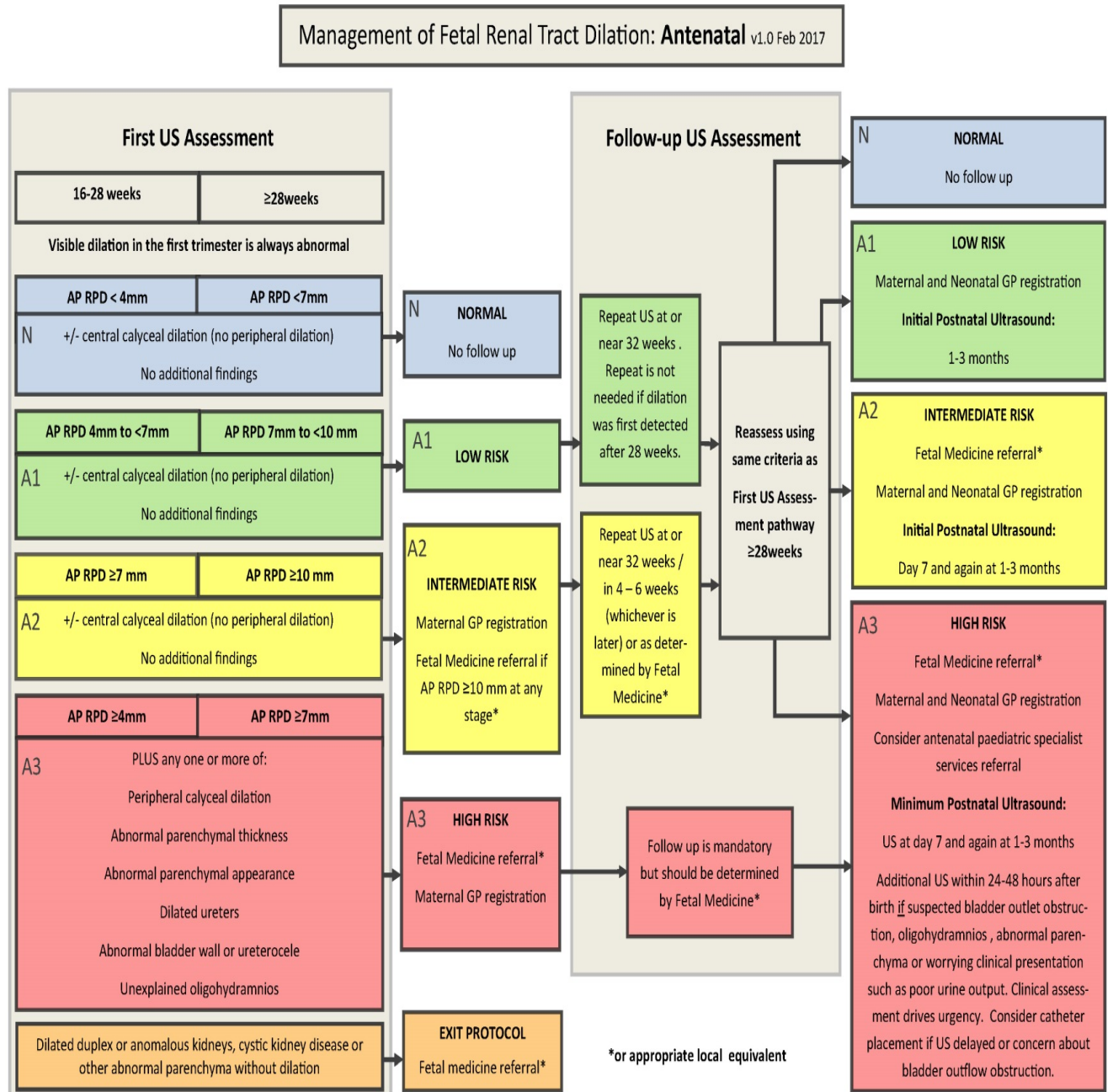
- Starship (2017). Management of Fetal Renal Tract Dilation: Antenatal (v1.0 Feb 2017). Retrieved Sep 5, 2019 from <https://www.starship.org.nz/guidelines/renal-national-antenatal-renal-dilation-guideline/>

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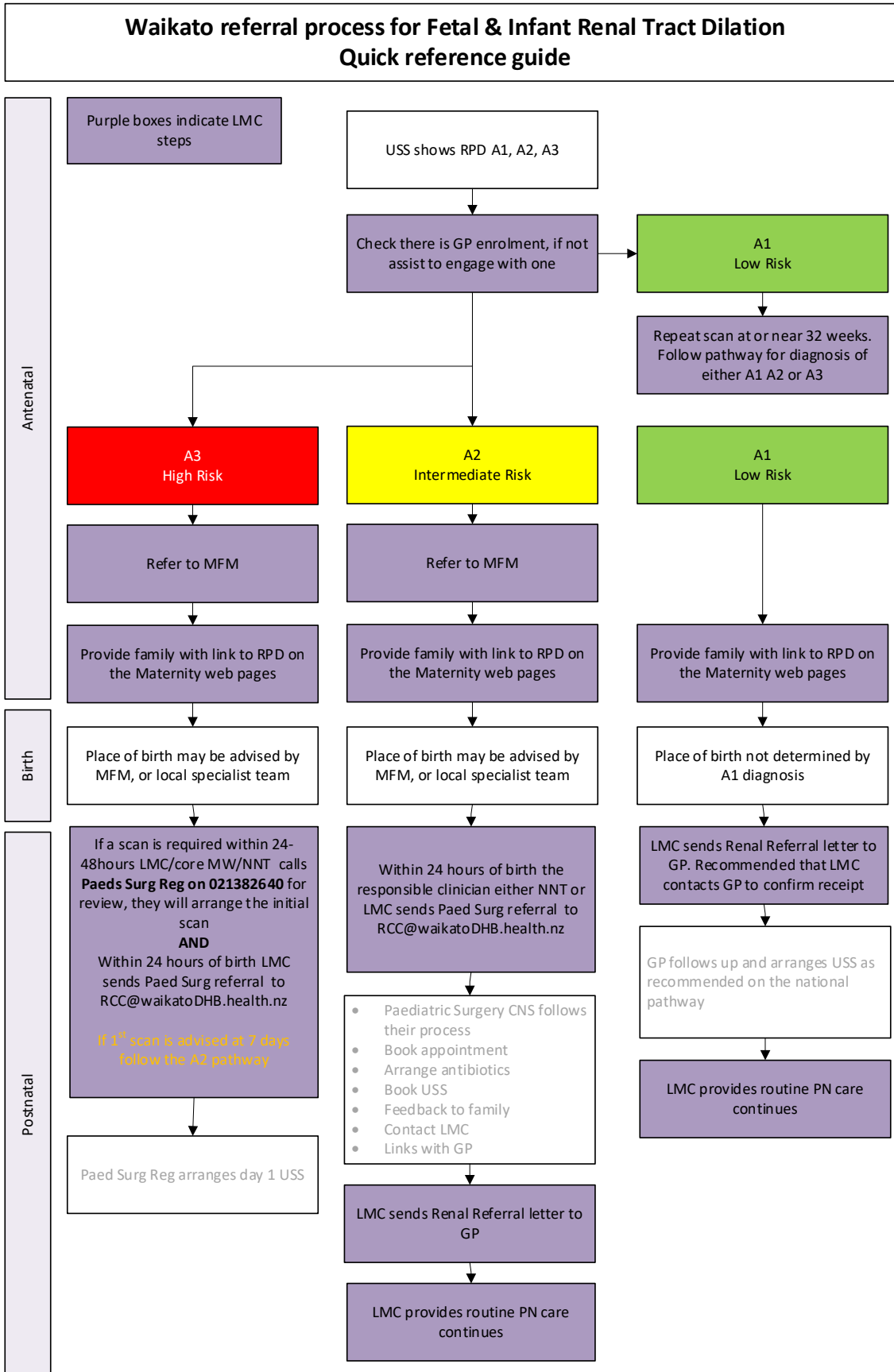
Appendix A – Flowchart 1: Management of fetal renal tract dilation: Antenatal

Source: <https://media.starship.org.nz/renal-tract-dilation-flow-chart/renal-tract-dilation-flow-chart.pdf>



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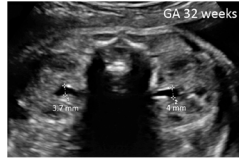
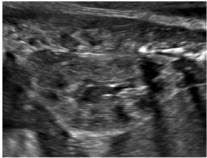



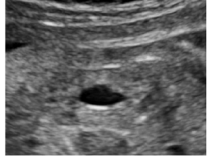
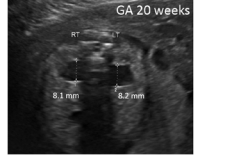







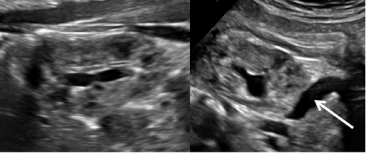

Appendix B – Quick reference guide



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Appendix C – UTD Classification: Ultrasonographic antenatal presentation

UTD CLASSIFICATION
Ultrasonographic Antenatal Presentation

Transverse	Sagittal	Description
 <p>GA 32 weeks 3.2 mm 4 mm</p> <p>NORMAL</p>		<p>16-27 weeks GA AP RPD < 4 mm</p> <p>≥ 28 weeks GA AP RPD < 7 mm</p>
 <p>GA 19 weeks 6 mm 6 mm</p> <p>A1</p>  <p>GA 37 weeks 7 mm 7.2 mm</p>	 	<p>16-27 weeks GA AP RPD 4 to < 7 mm plus central calyceal/infundibular dilation</p> <p>≥28 weeks GA AP RPD 7 to <10 mm plus central calyceal/infundibular dilation</p>
 <p>GA 20 weeks RT LT 8.1 mm 8.2 mm</p>  <p>GA 32 weeks RIGHT LEFT 6.5 mm 7.4 mm</p> <p>A2-3</p>  <p>GA 20 weeks RT LT</p>  <p>GA 20 weeks</p>  <p>GA 32 weeks 5.8 mm 6.5 mm</p>	   	<p>16-27 weeks GA AP RPD ≥ 7 mm</p> <p>≥ 28 weeks GA AP RPD ≥ 10 mm</p> <p>AP RPD within normal range Peripheral calyceal dilation present</p>  <p>Abnormal renal parenchyma (and/or abnormal bladder)</p> <p>Ureteric dilation</p>

GA: Gestational Age UTD: Urinary Tract Dilation AP RPD: Antero-Posterior Renal Pelvic Diameter



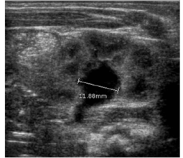
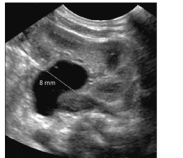
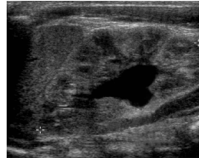

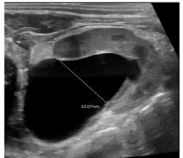

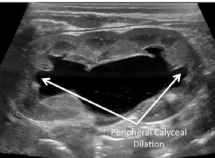
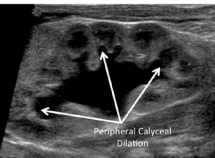

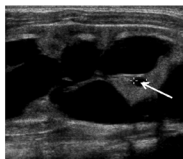
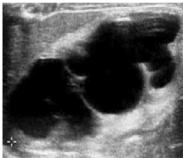

Adapted from *J Pediatr Urol* (2014) 10:982-98 with thanks to Drs Chow & Nørvén

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Appendix D – UTD Classification: Ultrasonographic postnatal presentation

UTD CLASSIFICATION
Ultrasonographic Postnatal Presentation

Transverse		Sagittal	Description
	NORMAL		AP RPD < 10 mm without urinary tract abnormality
 	P1	 	AP RPD 10 to < 15 mm and/or Central calyceal (infundibular) dilation
 	P2	 	AP RPD > 15 mm and/or Peripheral calyceal dilation
 	P3	 	Ureteral dilation Abnormal renal echogenicity Renal cysts Bladder abnormality (scans are from different patients)

UTD: Urinary Tract Dilation **AP RPD:** Antero-Posterior Renal Pelvic Diameter
"Central calyceal" = infundibula

Adapted from *J Pediatr Urol* (2014) 10:982-98 with thanks to Drs Chow & Nguyen

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