THE ROYAL WOLVERHAMPTON NHS TRUST
Specialist Clinical Practice Renal Unit sub-committee

Practice Reference:	**SNCP10**
Title:	Transonic monitoring of vascular access
Date of Implementation:	Aug 2008
Version	**3**
Review Dates:	March 2015
Date of next review:	March 2018
Authors Title:	Renal Advanced Nurse Practitioner
Policy Location:	Renal Unit Specialist Clinical Practice Folder/Trust Intranet

1.0 Practice Statement

1.1Transonic monitoring of vascular access aims to perform;
a) Delivered blood flow monitoring
b) Access recirculation measurement
c) Access flow measurement.

1.2 The aim of the practice is to monitor and maintain patency of vascular access and to facilitate early intervention if problems are highlighted by the study in order to improve dialysis delivery and reduce further deterioration or failure of vascular access.

1.3 To be undertaken by a registered nurse with a renal qualification, or an RN with training from a renal nurse who has been assessed and deemed to be competent

2.0 Equipment:

- Transonic flow/dilution sensor lead and monitor
- Ultrasound Gel
- 1 x 30ml syringe
- Gauze x 1 packet
- 3 x 10ml vials 0.9% Normal Saline
- Detergent wipe

3.0 Detailed action

3.1 Provide patient with explanation of procedure and gain consent

3.2 Wash hands with soap and water and dry thoroughly

3.3 Plug flow/dilution sensors into the connector on the back of the HD03 monitor.

3.4 Turn on the Power switch.

3.5 Apply ultrasound gel to the sensing cavity of the arterial sensor and position it approx. 5 – 10cm from the needle connection on the arterial blood line.

3.6 Ensure the arrow on the sensor is pointing in the direction of flow.

3.7 Repeat for the venous sensor on the venous blood line.

3.8 Select Find or Add patient by pressing the respective menu button and following on screen directions on the Transonic monitor

3.9 **Measure patient** – press the ‘measure patient’ menu button and select appropriate tubing from the options listed and press ok.

3.10 **Choose protocol** – Choose delivered blood flow, ‘Recirculation’ or ‘Access’ flow protocol from the menu.

3.11 Enter dialysis pump setting using the keypad and check machine setting with measured flow on the transonic screen.

3.12 If there is a greater than 10% discrepancy check sensor placement, tubing selection and / or kinking of lines.

3.13 **Recirculation** – Press Recirculation from the choose protocol screen and follow instructions.

3.14 When measurement is completed a recirculation curve and a calculated % will be displayed on the screen.

3.15 **Access flow measurement** – Press access flow on the choose protocol screen and follow instructions. Stop the blood pump, reverse the blood lines and set the dialysis pump at 250 – 300ml/min. Follow the on screen instructions.

3.16 When measurement is completed a recirculation curve and a calculated % will be displayed on the screen.

3.17 Stop the blood pump and return blood lines to original position.

3.18 Disconnect and clean sensors with a detergent wipe prior to turning off monitor or proceeding to next patient.

4.0 Financial Risk Assessment

4.1 Following a Risk assessment of this clinical practice no financial risks have been identified.

5.0 Equality and Diversity Risk Assessment

5.1 Following an Equality and Diversity risk assessment of this clinical practice, no equality and diversity risks have been identified.

6.0 Maintenance

6.1 This clinical Practice will be reviewed and kept up to date by the Renal ANP and the Renal Unit sub-committee workgroup will recommend changes and amendments.

7.0 Training

7.1 All staff undertaking this practice must have received training to include:

Demonstration of practice
Supervised practice

All staff undertaking the procedure must have been competency assessed and deemed competent in the procedure by a competent practitioner.

8.0 References

Transonic Systems Inc. (2007) Flow based Arteriovenous (AV) Access Management. Transonic Systems Inc.: USA.

Reducing vascular access morbidity: a comparative trial of two vascular access monitoring strategies. Nephrology, Dialysis, Transplantation vol 18 Issue 6 p1174 – 1180 Aug 2003.