



# Ultrasound mapping of new cannulation sites for Arteriovenous fistula/grafts at South Tyneside and Sunderland Foundation Trust (STSFT) Renal Unit.

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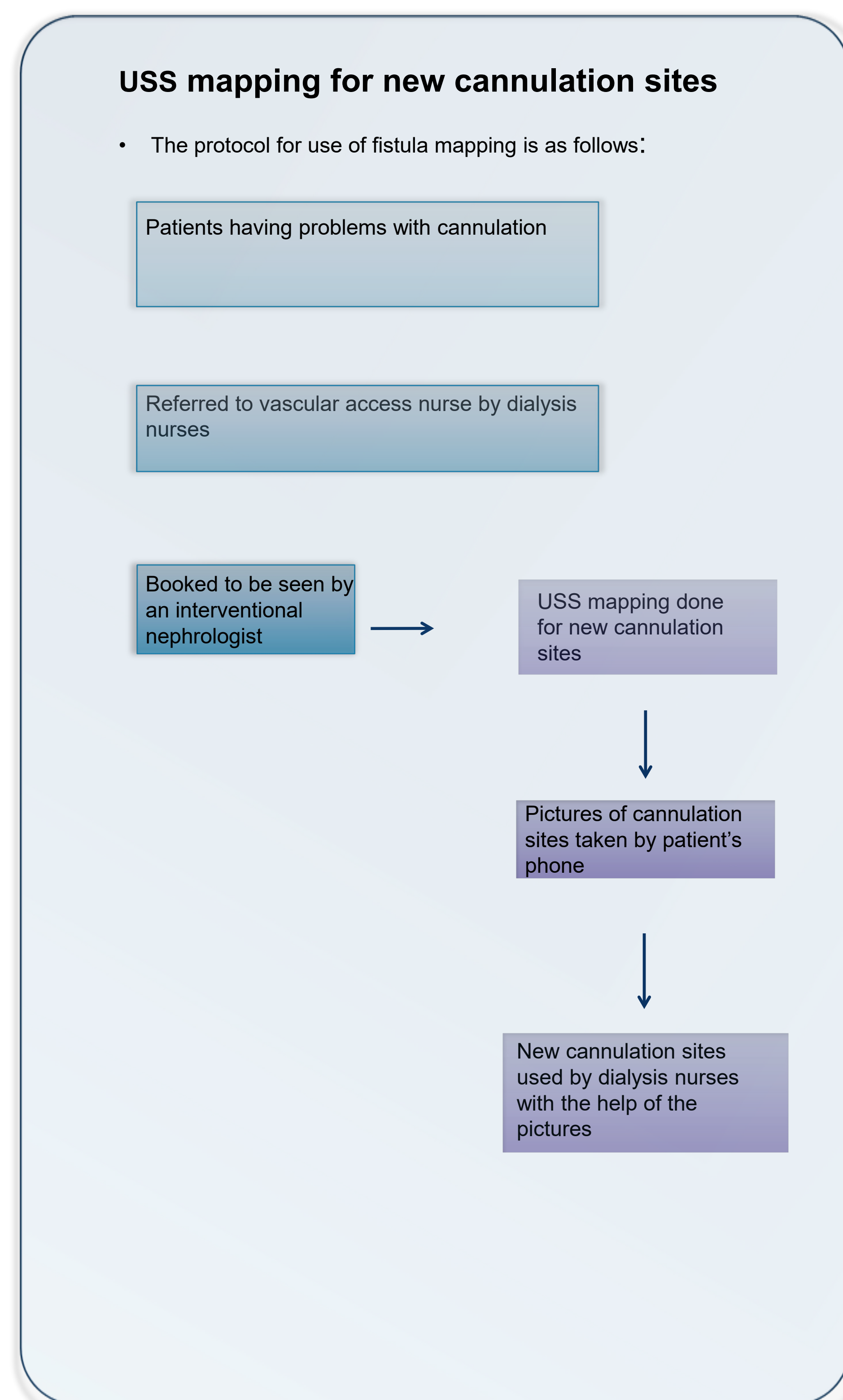
## Introduction

Vascular access remains the lifeline for dialysis population where arteriovenous fistula/graft cannulation plays a pivotal role in the well being of these patients<sup>1</sup>. The cannulation specially becomes difficult in elderly, diabetic and obese patients<sup>2</sup>. The accessibility of an AV fistula largely relies on the condition of the patient's veins, which often leads to difficulty in cannulation with the traditional blind method<sup>3</sup>. STSFT Renal unit adopted ultrasound mapping of new cannulation sites for arteriovenous fistulas and arteriovenous grafts<sup>4</sup>. The aim of this study was to evaluate the qualitative impact of this practice on the dialysis patients.

## Methodology

This was a qualitative study and was conducted in the Renal Unit at STSFT. Haemodialysis patients with deep or small vessels for cannulation, a vessel with a history of frequent multiple cannulation failures and extravasations and a vessel whose cannulation on the first attempt was vital were included in the study. AVF/AVG were mapped using USS undertaken by a consultant Interventional Nephrologist (IN). The map of the AVF/AVG and new cannulation sites were captured as an image on the patients' smart phone to act as record to show the dialysis nurse cannulating the AVF/AVG. It was hoped that this would encourage rope laddering and AVF/AVG preservation.

## Our Experience: Interventional Nephrology Clinics



## Overall patient satisfaction

Patients reported no significant improvement in cannulation processes even after USS mapping of new cannulation sites. Patients did report a better understanding of the AVF/AVG geometry especially amongst the self cannulators on home haemodialysis. According to the patients the successful cannulation was mainly dependent on the skills of dialysis nurses rather than the USS mapping of the AVF/AVG being of any assistance.

## Conclusions

Although IN led USS mapping service of AVF/AVG does not seem to have the desired impact. A number of important lessons have been learnt as listed below that can be fed into future Plan Do Study Act cycle.

## Recommendations

1. Nurse education on rope laddering
2. Real time USS by dialysis nursing staff for cannulating AVF/AVG
3. Increasing interest and motivation amongst dialysis nurses to learn new cannulation techniques

## REFERENCES

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