

Implementation of a 1-Stop Vascular Duplex Scan Service Within the Outpatient Department

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INTRODUCTION

The vascular patient pathway involved a lengthy route from initial referral to management decision, with patients attending hospital for at least two appointments before receiving their diagnosis. This route has cost implications due to vascular consultant time for multiple consultations and associated administrative time, contributing to delayed diagnosis and instigation of treatment, as well as having a negative impact on waiting lists (Logan and Lane, 2021).

The Vascular Assessment Unit (VAU) have implemented a one-stop duplex scan service within the Outpatient Department, moving away from a two- or three stop model. This allows patients to be reviewed by a vascular consultant, scanned by a vascular scientist, then see the consultant a second time to discuss results and plan ongoing management – all in one visit. This pathway is recommended by the Vascular Society (2021) and has been successfully implemented within Vascular Surgery in other trusts (Logan and Lane, 2001; Sandison et al, 1997; Vascular Solutions, 2017) and has been shown to reduce patient anxiety in other specialties (National Institute for Clinical Excellence, 2002).

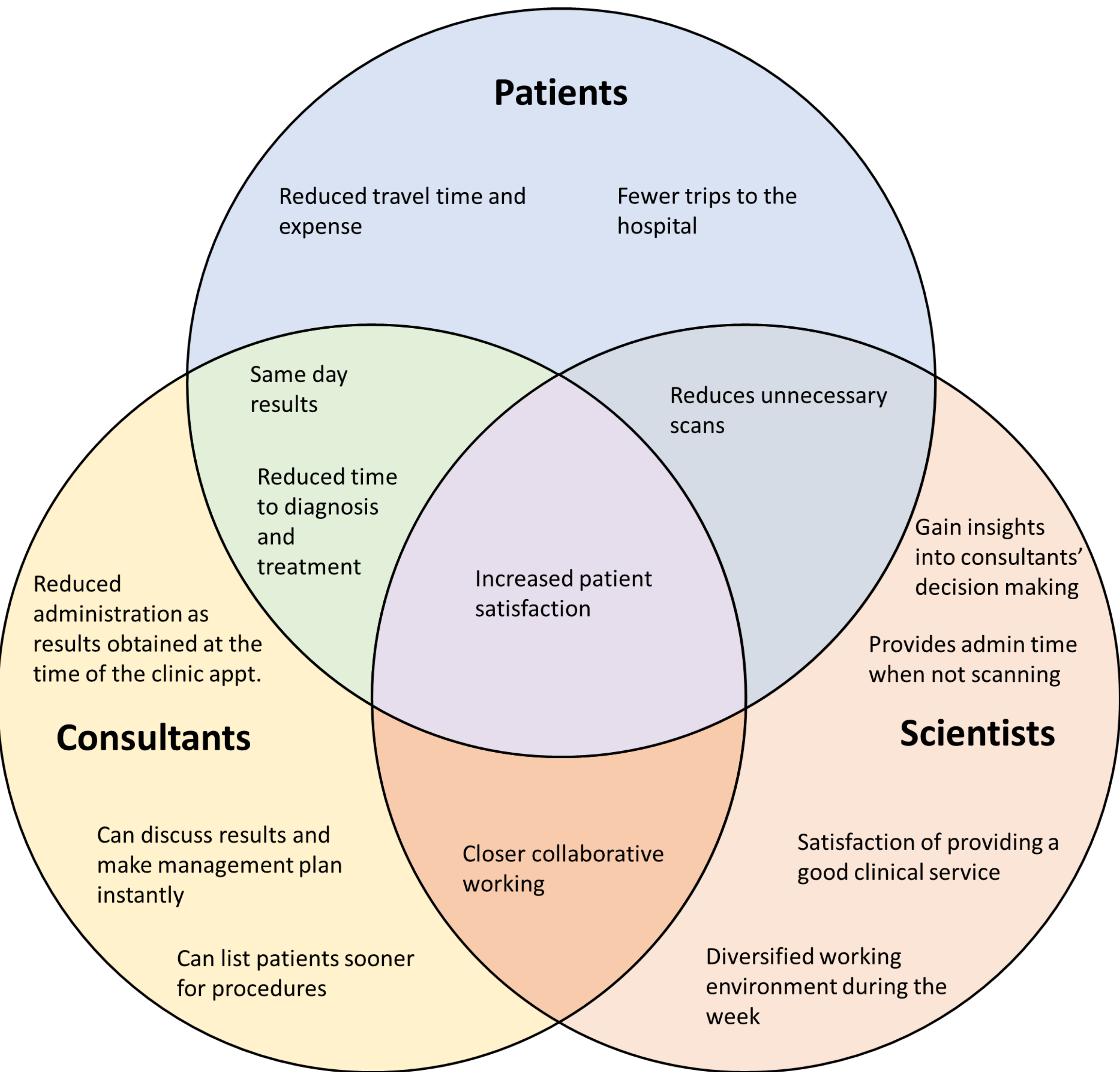
OBJECTIVES

- Streamline the vascular patient journey by addressing the environmental and process factors contributing to the slow pathway (figure 1)
 - Reduce the number of hospital visits for patients
 - Reduce the number of Outpatient Department appointments and therefore the waiting list
- Consequently:
- Achieve cost savings through reduced Vascular Consultant time per patient
 - Improve patient experience

METHODS

- The VAU portable ultrasound machine is used to scan patients within the outpatient department during the twice weekly Vascular Outpatient clinics. A verbal report is given to the consultant allowing immediate management plan to be made.
- This model was piloted for four months, with a Plan-Do-Study-Act (PDSA) model used for implementing, reviewing, and improving the process.
- Feedback was obtained from key stakeholders to inform improvement.

Figure 1: Venn Diagram showing benefits of the service from feedback following the pilot.



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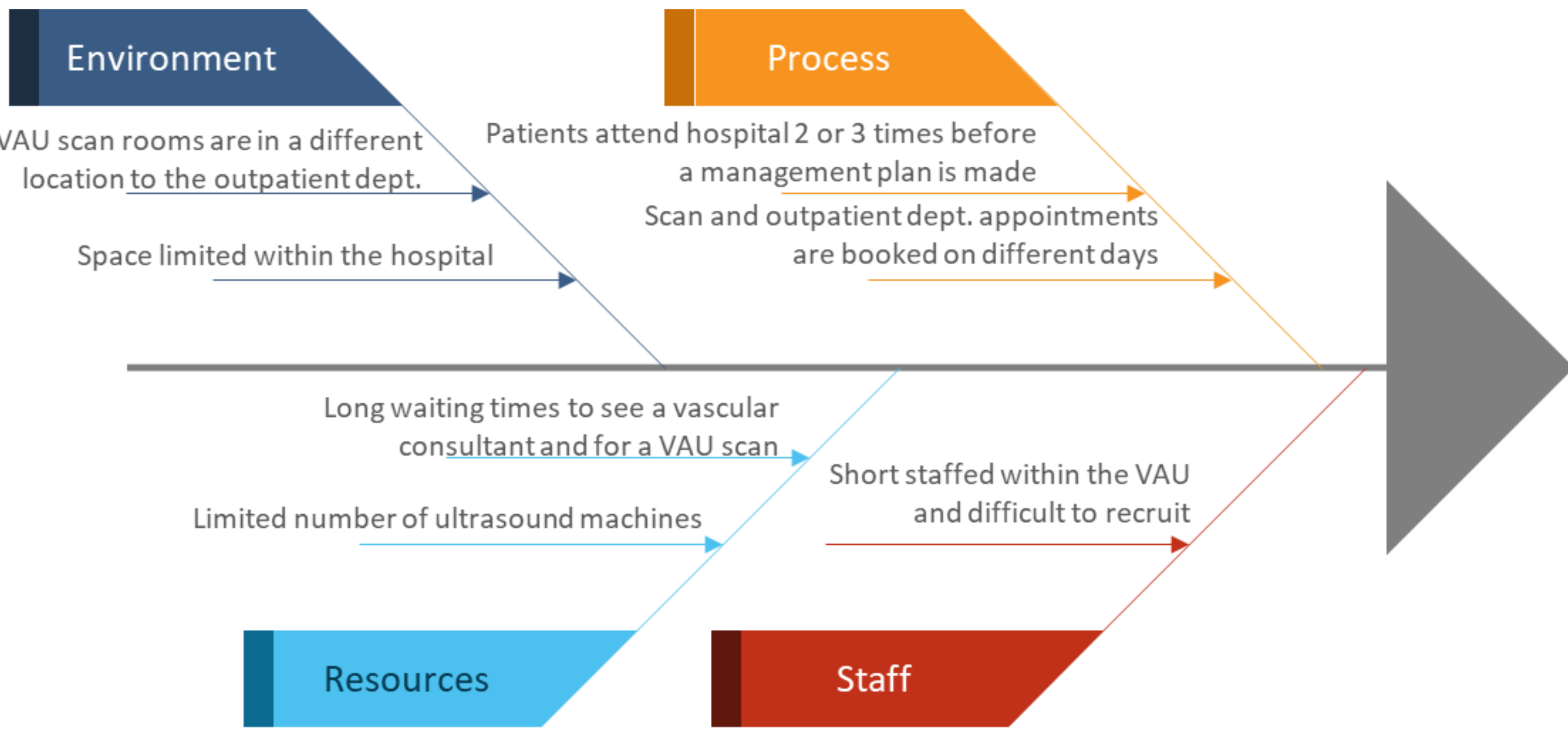


Figure 2: Root cause analysis of factors contributing to the slow vascular patient pathway

RESULTS

- Over the pilot period:
- 64 patients scanned in clinic, with a mean of 2.4 scans per session (range 0-5).
 - The mean scanning time in each session was 72.8 minutes (range 0-165 minutes).
 - 2 patients pre-booked for in-clinic scans found not to require imaging following consultant review, avoiding unnecessary scans.
 - 100% of vascular consultants who provided feedback (5/6) report that it has benefited both them and patients, and 100% wish for it to continue within their clinics.
 - Collated feedback from vascular consultant, scientists and patients is shown in figure 2.

DISCUSSION

- The scan demand within the outpatient department can be met, providing immediate results to the vascular consultant and patient. 64 patients had in-clinic scans during the audit period, avoiding repeat hospital visits for this group and allowing immediate management decisions to be made by the consultant. Furthermore, unnecessary scans were avoided for some patients who previously would have had pre-clinic scans.
- Feedback revealed that a separate scan room within the Outpatient Department will further improve the service by reducing delays in clinic; this will be explored.
- The team also raised concerns that inpatient scan capacity could be impacted. To mitigate this, a flexible approach was applied during the pilot allowing the portable machine to be taken to the wards when no in-clinic scans were required.
- Long-term, this service will be extended to peripheral sites where Vascular Outpatient clinics are held to ensure equity in service provision irrespective of location.

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