

To Reduce Average Length of Stay for Elective Arteriovenous Fistula (AVF) Angioplasty in End Stage Renal Failure (ESRF) patients

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Mission Statement

Reduce Average Length of Inpatient Stay for Elective Arteriovenous Fistula (AVF) Angioplasty in ESRF patients with failing AVF by 30% in 6 months in TTSH

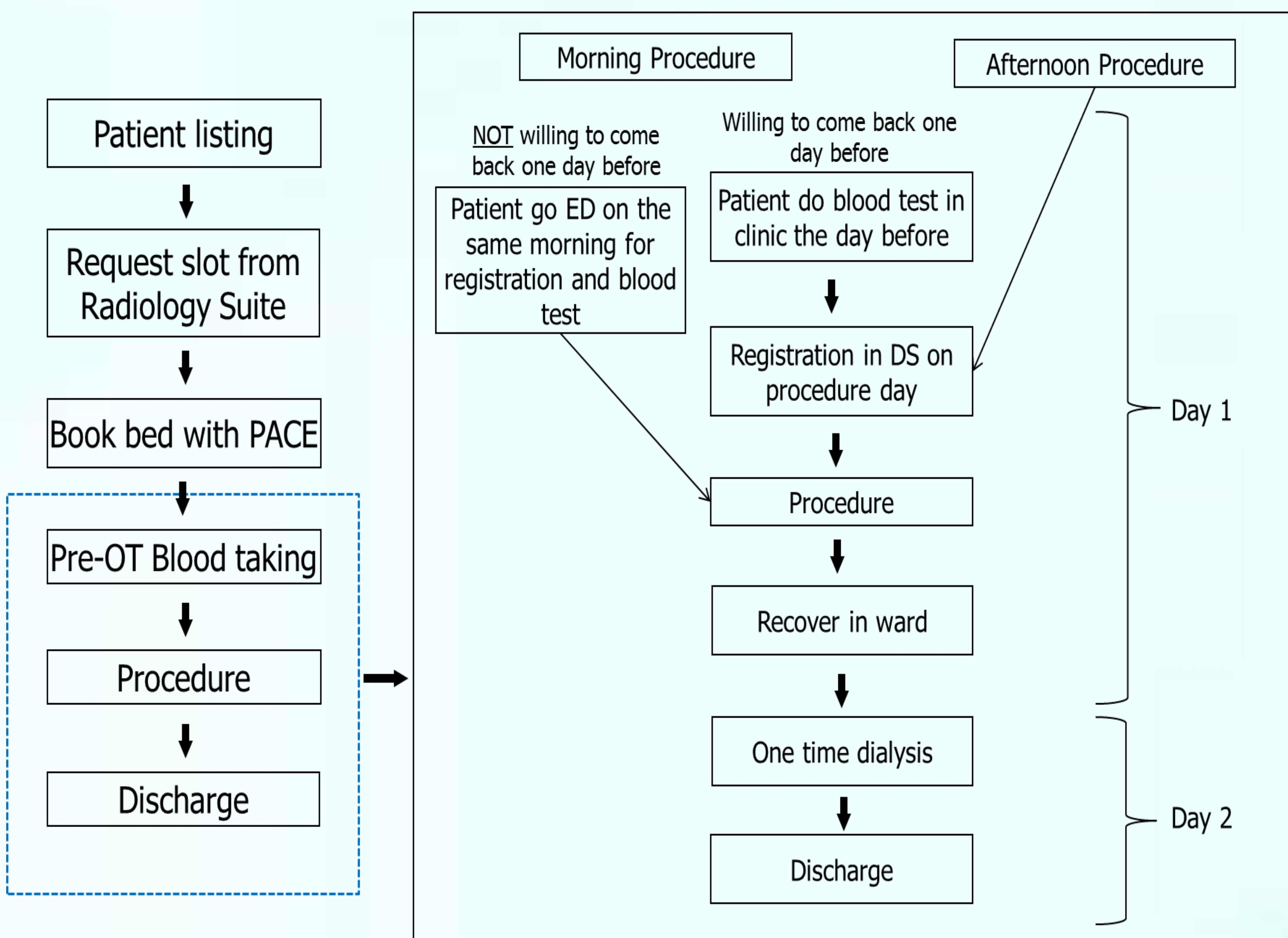
Team Members

| | Name | Designation | Department | Role |
|-----|------------------|----------------------|--------------------------|--------|
| 1. | Dr Glenn Tan | Consultant | GS | Leader |
| 2. | Ms Canny Lee | Asst Director | Inpatient Services | Leader |
| 3. | Ms Cindy Lim | Senior Executive | GS | Member |
| 4. | Ms Neo Shufen | Vascular Coordinator | GS | Member |
| 5. | Dr Tan Bien Peng | Consultant | Interventional Radiology | Member |
| 6. | Ms Hayati | PSA | Clinic 2A | Member |
| 7. | Sr Adeline Tang | Nurse Manager | Day Surgery | Member |
| 8. | Sr Low Ser Yong | Nurse Manager | DSU / PACU | Member |
| 9. | SN Sarbjit Kaur | SN | Clinic 2A | Member |
| 10. | Jegatheeswari | PSA | Radiology | Member |

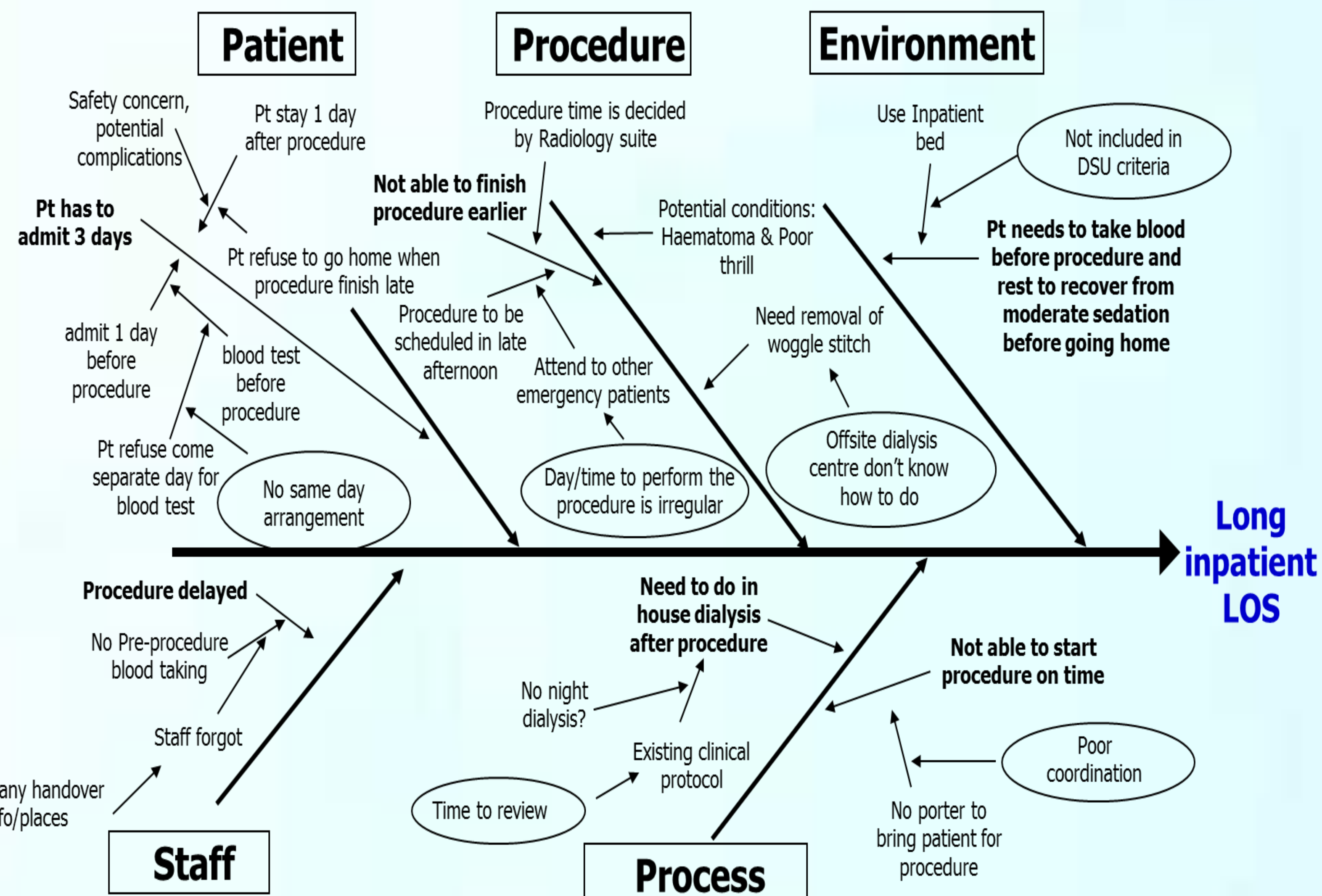
Evidence for a Problem worth solving

- Constant Bed Crunch in TTSH
- Current Elective AVF Angioplasty ALOS is 3 days
- Longer ALOS also incurs higher cost for patients
- Several centres in UK (Leicester, Birmingham) are doing Day case or AS23 Fistuloplasty

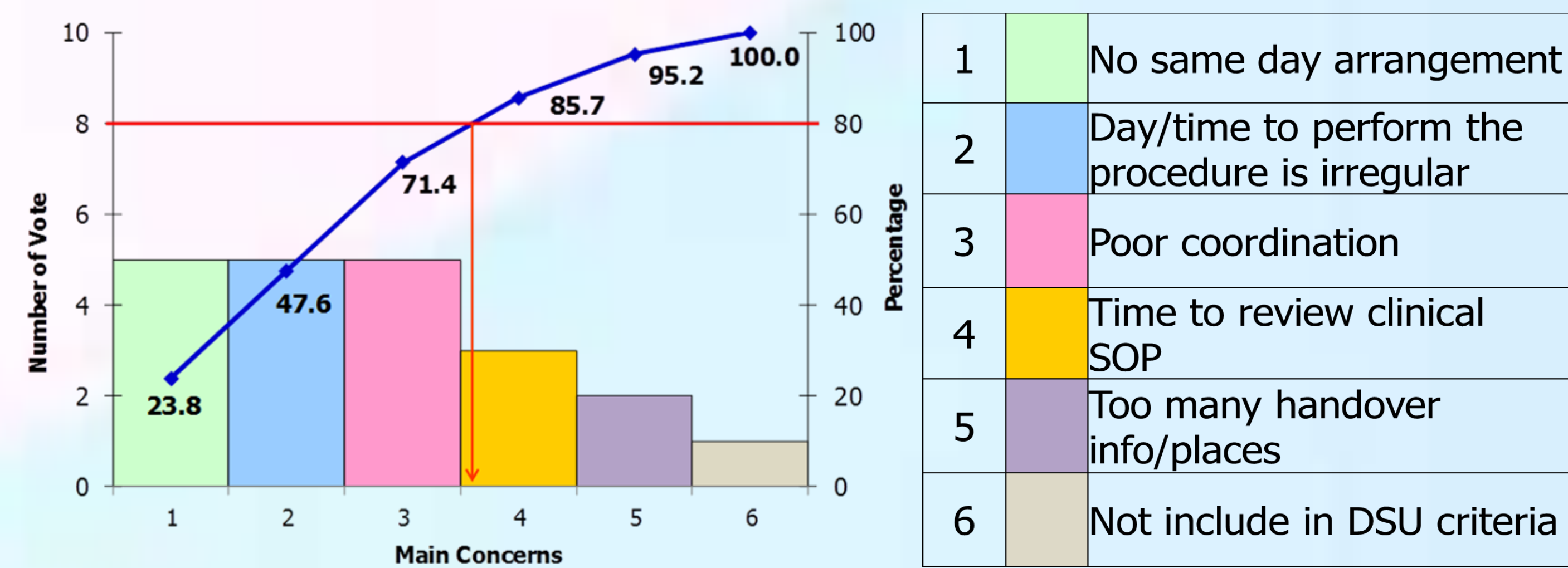
Flow Chart of Process



Cause and Effect Diagram



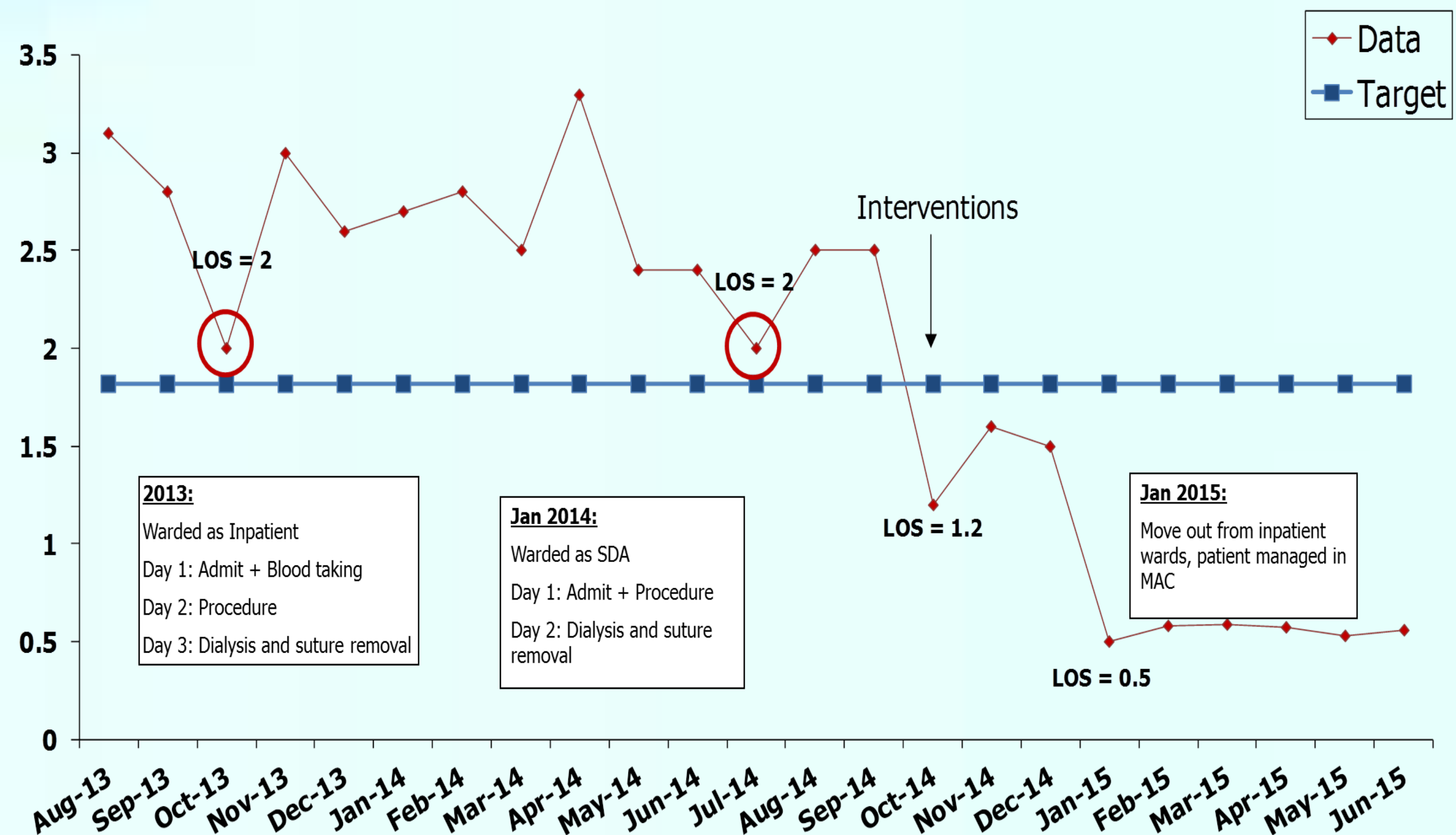
Pareto Chart



Implementation

- To list procedure within 2 weeks from consultation, at 10am or 1130am only, on WED/THURS/FRI.
- Blood test will be done on same day of procedure.
- Patients discharged 6 hours post procedure if good thrill in AVF present (indicating successful procedure) and no bleeding complications.

Results



Cost Savings

- Before intervention: ALOS 2.6 days (Aug 2013 – Sep 2014)
- Target: ALOS 1.82 days (30% improvement)
- Post intervention ALOS: 1.4 days (Oct & Nov 2014)
- Total bed days saved per month 1.2 x 8 pts = 9.6 bed days
- TTSH inpatient ALOS in 2013 is 7 days, GS is 4.7 days

It means by doing this CPIP, we will be able to turn around 2 episodes more per month. The ROI is 25%.

Problems Encountered

- Many stakeholders managing workflow for elective fistuloplasty resulting in several variations and lack of standardization.
- People are not keen on change and unwilling to work outside comfort zone.

Strategies to Sustain

- Proper communication to encourage early discharge.
- Extend protocol to other endovascular procedures eg. Peripheral lower limb angioplasty, Trans-arterial chemo-embolisation (TACE), embolisation of Arteriovenous malformations (AVM).

Update: Recruited 24 lower limb angioplasty patients into this project, which 1 stayed 2 days, 7 stayed 0.5 day, 16 stayed 1 day. ALOS is 0.9 day (original LOS is 3 days).

Lessons Learnt

- Good team work required for success.
- When outcome is better than expected, we took the initiative to apply on other procedure and gain more success.