



# MICROSURGICAL SKILLS IN ARTERIOVENOUS FISTULA CREATION IN SARAWAK DURING COVID

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## INTRODUCTION

The incidence rate of end stage renal disease (ESRD) requiring dialysis in Malaysia is 216 per million population in year 2016, double the amount from year 2002. Arteriovenous fistula (AVF) creation is the most preferred vascular access for hemodialysis compared to internal catheter insertion with lower rate of catheter related blood stream infection and thrombosis. In Sarawak, AVF creation is mainly done by the plastic surgeons, vascular surgeon and urology surgical team to ease the high volume cases per year.

## RESULTS

A total of 1774 cases of AVF creation were done by plastic surgeons in Sarawak, with most of the cases performed in Hospital Sibu, 50% (n=887), followed by Sarawak General Hospital (SGH), 29% (n=360), Hospital Miri, 9% (n=172), Hospital Bintulu, 7% (n=137), Hospital Sarikei 5% (n=103), Hospital Kapit 3% (n=58), Hospital Limbang 2% (n=31) and Hospital Sri Aman 0.9% (n=17). Smaller district such as Lawas has the least case performed, 0.5% (n=9). More data is needed for the long term outcome and radiological intervention for the patients post AVF creation.



## AIM

This paper detailed the microsurgical technique and AVF creation services provided by the plastic surgeons in Sarawak from year 2019-2022.

## METHODS

All AVF creations are performed under local anesthesia. Soft tissue handling, dissection and micro anastomosis with micro sutures are performed under loupe or microscope. A retrospective data has been collected from the operative data done by plastic surgeons in Sarawak including the extended services in various districts such as Bintulu, Miri, Sibu, Sri Aman, Sarikei, Kapit, Limbang and Lawas.

Percentage of AVF creation services in Sarawak

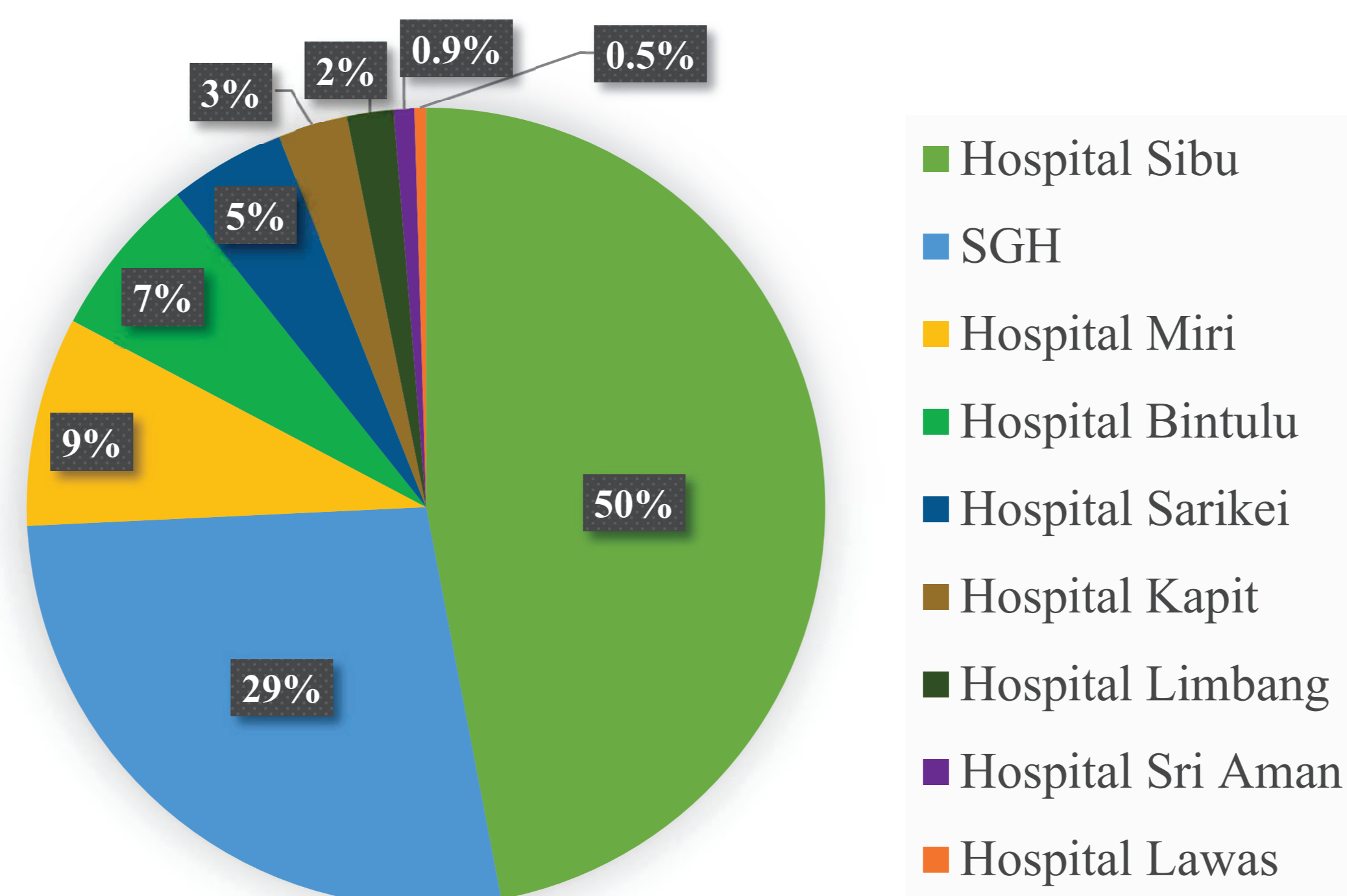


Chart 1 showed percentage of arteriovenous fistula creation services in Sarawak.

Distant from SGH	By land (km)	By flight (km)
Hospital Sibu	396	184
Hospital Bintulu	618	351
Hospital Miri	809	513
Hospital Lawas	1040	671

## CONCLUSION

The outreach visiting services done by Plastic Surgeons in Sarawak reduced the financial burden of the patients with ESRD and allow better accessibility of the AVF services, more so during Covid time with the closure of interdistrict borders and the country Brunei, affecting the patients logistically.