

# **Surgical Research Society - 2021 July Meeting**

## **Eastern and Greater Southern Sydney Surgical Skills Training Network**

**Date: 29th July 2021**

**Venue: Zoom**

### Attendees

- David Abi-Hanna, Ben Xie, Katherine Pearce, Thomas Warburton, Bryan McManus, Avinesh Chelliah, Claire Lim, Hayden Ly, Sally Chung, Dominic Mah, Vivian Lin

### Agenda

- 1) Statistics in Surgical Research - Dr Peter Geelan-Small
- 2) St Vincent's Research Update - Dr David Evans
- 3) Journal Club Presentation - Dr Dominic Mah
- 4) Committee Updates

### **The Challenge of Everyday Statistics in 30 Minutes - Peter Geelan-Small**

p.geelan-small@unsw.edu.au

### Starting your project

- Have a statistical plan from the very start of your project
- Fancy statistics can't fix holes in design!
- List out the outcome variables with what analysis method you intend you use at the end
- Check assumptions to ensure analysis method is appropriate
- Discuss with a statistician early on
- Consider "An Introduction to Medical Statistics", by Martin Bland

### Example Data Analysis

- Assumptions are crucial to consider when using any statistical analysis. Can we use the raw data without any adjustments before analysing?
  - Variance
- They should be checked, usually using diagnostic plots and not hypothesis tests
- Sample data had significant skew
  - This was rectified with a log transformation to enable statistical analysis which also reduced the error of the analysis
- ANOVA test
  - Useful for comparing between more than 2 independent groups
  - A p-value adjustment may be required

### Question from Sally Chung

- In analysis of multivariate data, should we perform multiple univariate analyses?
  - Response: varying responses from different statisticians but advice is to avoid doing this.

## **Research Update from Dr David Evans**

[davidevans81@bigpond.com](mailto:davidevans81@bigpond.com)

### Example Editor's Comment on Case Report

- Valid criticism
- Benefit in observing what aspects of your research the Editor's were interested in, regardless of the outcome

### Research Opportunities

- StV and RPA: combined audit of ECMO registries
  - Ethics submitted already
  - Potential for multiple publications
  - Dr Bryan McManus (Vascular Registrar) - Point of Call
- Writing of Protocol for Simultaneous Organ Transplant
  - Literature review of simultaneous organ transplants
  - Only 6 in Australia per year, 150 world wide
- Case Reports
- Impact of COVID on Surgical Waitlists of Regional vs City-based Hospitals
  - Compare date on booking form vs date of surgery
  - Observing non-COVID waiting times
  - Compare to Ministry data
  - Would require data from multiple sites

## **Journal Club - Dr Dominic Mah**

### **Surgical Plating vs Closed Reduction for Fractures in the Distal Radius in Older Patients CROSSFIRE Trial**

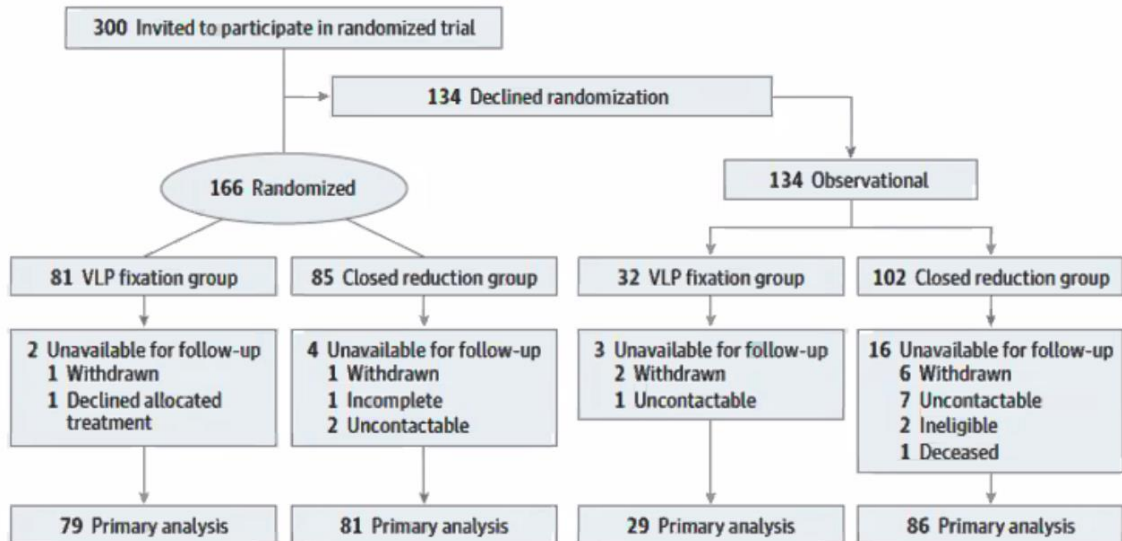
[https://jamanetwork.com/journals/jamasurgery/article-abstract/2775060?casa\\_token=bF5AG0dhTOkAAAAA:gjVZ6lnmWxgGcGhdTlf5DZWvocBzCOFi9mQCvWRiHZQ8sA8RD\\_tnp7q-vPA3JcZSg1C3p48a2A](https://jamanetwork.com/journals/jamasurgery/article-abstract/2775060?casa_token=bF5AG0dhTOkAAAAA:gjVZ6lnmWxgGcGhdTlf5DZWvocBzCOFi9mQCvWRiHZQ8sA8RD_tnp7q-vPA3JcZSg1C3p48a2A)

### Literature Review

- Mainly retrospective studies, suggesting no clinical significant difference

Non-operative = closed reduction in OT or ED

Operative = Volar locking plate



No statistically significant difference in Patient-Rated Wrist Evaluation scores at 12 months  
 Nil difference in pain, quality of life, total complications  
 Statistically significant at 3 months (favouring surgery) but not clinically significant  
 Operative group were more likely to report treatment success and also more likely to follow through with therapy

**Research Update - Dr Avinesh Chelliah**

- Research Showcase planned for early November
- Call-outs and invitations to be distributed soon

Next Meeting: Thursday 26th August