Rural biostatistics workshop:
Beyond P<0.05: what does statistical significance really mean?

Thursday 22 November 2018
The Chalet, Docker St, Wangaratta

What is the difference between statistical significance and clinical significance and how do you make decisions about the real-world relevance of either?

Most researchers use P-values for data analysis and apply an alpha of 0.05 as the cut-off for significance. If the P-value is less than 0.05, we reject the null hypothesis there is no difference between the means and conclude a significant difference does exist. Or in simple terms…below 0.05, significant; over 0.05, not significant! But what does 'significant' actually mean and what does(n't) a P-value tell us about the differences that might exist between data?

This workshop is designed as an introductory level workshop for health professionals who want to better understand how to interpret the reporting of statistical results. The workshop will explore beyond the simple how-to of statistical testing to delve into the underlying concepts and rationales for hypothesis testing.

Designed for the non-statistician, it will explore ideas such as:
- how to interpret P-values and the importance of confidence intervals and effect sizes;
- what does an insignificant P-value mean and should this be explored further and;
- misuse and misinterpretation of P-values, including P-hacking and selective reporting.

Facilitators: The day will be facilitated by Dr Charles Malpas from the Master of Clinical Research program, Department of Medical Education, Melbourne Medical School, the University of Melbourne.

Cost: $220

Register here: https://goingruralhealth.com.au/events/biostatistics-workshop-beyond-p/

Schedule

TIME	ITEM	
9.00am	- what does a p value actually mean and what does(n't) it tell us about the differences b/w data - what does an insignificant result mean and should these be explored further - p values and hypothesis testing, including Type I and Type II errors	Dr Charles Malpas, Clinical Outcomes Research Unit (CORe) at the Department of Medicine, Royal Melbourne Hospital
10.30am	**BREAK**	
11.00am	- how do you interpret p values and what is the importance of confidence intervals and effect sizes in this process? - p values VS odds ratios vs relative risk…what's the difference and how are they related?	Dr Kara Martin, Statistician, Cancer Epidemiology Centre, Cancer Council Victoria
12.30pm	**LUNCH**	
1.00pm	what is the difference b/w statistical significance and clinical significance: practical application?	Prof Julie Simpson, Head, Biostatistics Unit at the Melbourne School of Population and Global
1.30pm	Small group activity	Dr Charles Malpas, Dr Kara Martin
2.30pm	**AFTERNOON TEA**	
3.00pm	- examples of the misuse and misinterpretation of p values, including p-hacking and selective reporting - what to use instead	Dr Charles Malpas
4.00pm	**FINISH**	