Editorial

Making statistics understood . . . and getting it used

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This month, the *Journal of Physiology* begins publishing a series of articles on good practice for presenting and analysing data from experimental studies. Several other journals will simultaneously publish the same articles. What better message could there be but the title of the first one: 'Show the data, don't conceal them'? As a statistician working closely with clinical research colleagues, it frustrates me how often analyses are not clear in published articles, and how often the underlying data are not clear. This hampers both the convincingness of the paper's conclusions and – just as importantly – the value of the results found in helping to design further studies. So I urge all writers, for the benefit of your readers, please show us the data, don't conceal them.

No-one says that statistics is easy. People used to say that; many used to dismiss it as a series of unhelpful and irrelevant mathematical operations that had little to do with interpreting data. They might then, typically, have proceeded to incorrectly interpret their data! Today, most sensible researchers see statistical methods as necessary, even if sometimes frustratingly opaque. If you fall into that category, you have my sympathy. It is a difficult subject often made more so by poor communication on the part of some of my statistician colleagues. Often I have been asked, 'can't you write something simple on this subject?' Well, it's not easy but that is what Gordon Drummond and Sarah Vowler have set out to do. A

series of articles (one a month until around the middle of 2012) is planned, with a variety of authors contributing their skills and experience. Soon-to-appear topics include correlation and regression, analysing categorical data, sample size and power considerations, to list but a few.

Similar types of article series have been published before. Examples include the series of Statistics Notes in the *British Medical Journal* (starting in April 1994 and currently at number 55); a series on Advanced Statistics articles in *Academic Emergency Medicine* (from 2002 to 2007); a series on Trials on Trial in the *Medical Journal of Australia* (2004–2005); and a series of Users' Guides to the Medical Literature in *JAMA* (1993–2010). A good starting point for these is to simply search for 'statistics notes' on www.bmj.com. There are other similar series too but clearly none has solved all of the problems for all of the authors (or readers). Continuously reinforcing the message will undoubtedly help.

We encourage our authors to absorb the content of these new articles, thereby adding clarity to your writing. And we encourage readers to absorb the content too and help bring peer pressure to bear to improve the quality and usefulness of published research.

http://jp.physoc.org/cgi/collection/stats_reporting