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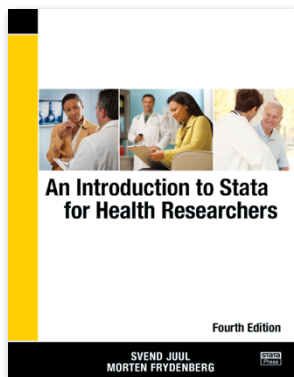
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What's new in this edition

- This book has been substantially revised based on new features that were added in Stata 12 and Stata 13.
- The updated material has been streamlined while including new features in Stata.
- There is now information for Mac users as well as Windows users.

An Introduction to Stata for Health Researchers, Fourth Edition



By Svend Juul
and Morten Frydenberg

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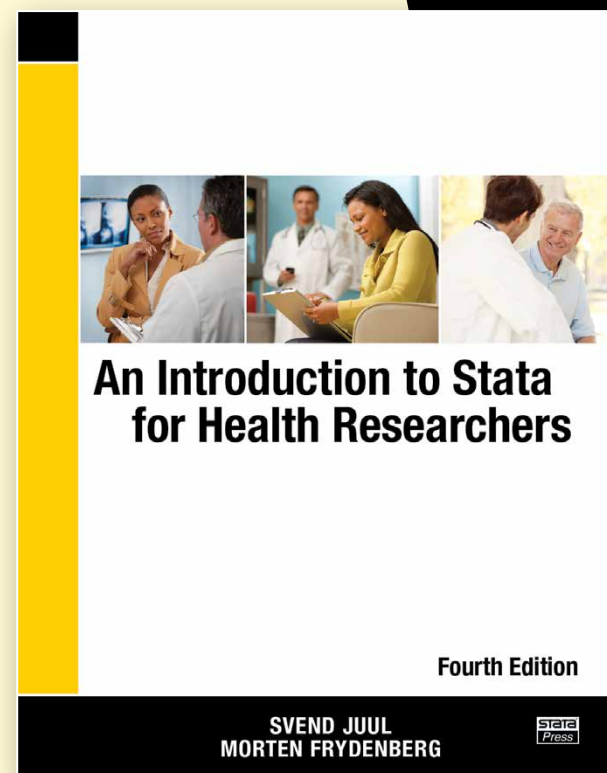
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About the authors

Svend Juul is a former associate professor, now part-time lecturer, in epidemiology at the School of Public Health, Aarhus University. Juul has extensive experience in teaching epidemiology to medical students and others and in teaching Stata and other computer programs to PhD students in the health sciences.

Morten Frydenberg is an associate professor of biostatistics at the School of Public Health, Aarhus University. He has a PhD in theoretical statistics and more than 20 years of experience as a biostatistical consultant in health sciences. Frydenberg has taught numerous courses in applied biostatistics at both graduate and postgraduate levels.

The book's audience

- New Stata users—familiarity with Stata is not assumed
- Experienced Stata users who would like to learn new aspects:
 - » Careful work habits for simple reproducible research
 - » A wide breadth of applied biostatistics and epidemiological analyses, including survival analysis, standardization, and analysis of case–control designs
 - » Data management of commonly used medical and public health data
 - » The nuts and bolts of Stata graphs
- Anyone wanting a good foundation in Stata

Comment from the Stata technical group

Svend Juul and Morten Frydenberg's *An Introduction to Stata for Health Researchers, Fourth Edition* is distinguished in its careful attention to detail. The reader will learn not only the skills for statistical analysis but also the skills to make the analysis reproducible. The authors use a friendly, down-to-earth tone and include tips gained from a lifetime of collaboration and consulting.

The book is based on the assumption that the reader has some basic knowledge of statistics but no knowledge of Stata. The authors build the reader's abilities as a builder would build a house: laying a firm foundation in Stata, framing a general structure in which good work can be accomplished, adding the details that are particular to various types of statistical analyses, and, finally, trimming with a thorough treatment of graphics and special topics such as power and sample-size computations.

Juul and Frydenberg start not only by teaching the reader how to communicate with Stata not just through its unified syntax but also by demonstrating how Stata thinks about its basic building blocks. The authors show how Stata views data, thus allowing the reader to see the variety of possible data structures. They also show how to manipulate data to create a dataset that is well documented. When demonstrating analysis techniques, the authors show how to think of analysis in terms of estimation and postestimation. They make the book easy to use as a learning tool and easy to refer back to for useful techniques.

Once they introduce Stata to new users, Juul and Frydenberg fill in the details for performing analysis in Stata. As would be expected from a book addressing health researchers, the authors mostly demonstrate the statistical techniques that are common in biostatistics and epidemiology: case–control, matched case–control, and incidence-rate data analysis; linear and generalized linear models, including logistic, Poisson, and binomial regression; survival analysis with proportional hazards; and classification using receiver operating

characteristic (ROC) curves. While presenting general estimation techniques, the authors also spend time with interactions and techniques for checking model assumptions.

While teaching Stata implementation, Juul and Frydenberg reinforce habits that allow reproducible research and graceful backtracking in case of errors. Early in the book, they introduce how to use do-files for creating sequences and log files for tracking work. At the end of the book, they introduce some useful programming techniques, such as loops and branching, that simplify repetitive tasks.

Comment from reviewer on the first edition

... The book is ambitious in attempting not only to provide an introduction but also to cover a wide range of advanced statistical methods. In this regard, it adopts an interesting blend of the style used in the Stata manuals (with content paralleling parts of the *Getting Started* manual, *User's Guide*, and various *Reference* manual entries, including commands such as those used for regression, logistic, and survival-time analysis) and that of more statistically oriented books such as Rabe-Hesketh and Everitt (2004). I think the book is remarkably successful, given such ambitions. ...

... I heartily recommend this book. It is well written, with an economical and clear style, and will provide an excellent resource for a wide range of Stata users (not just novices) in the health sciences and potentially beyond.

Excerpt from John Carlin, 2006. Review of *An Introduction to Stata for Health Researchers* by Juul. *Stata Journal* 6: 580–583.