Analysis of Observational Health Care Data Using SAS

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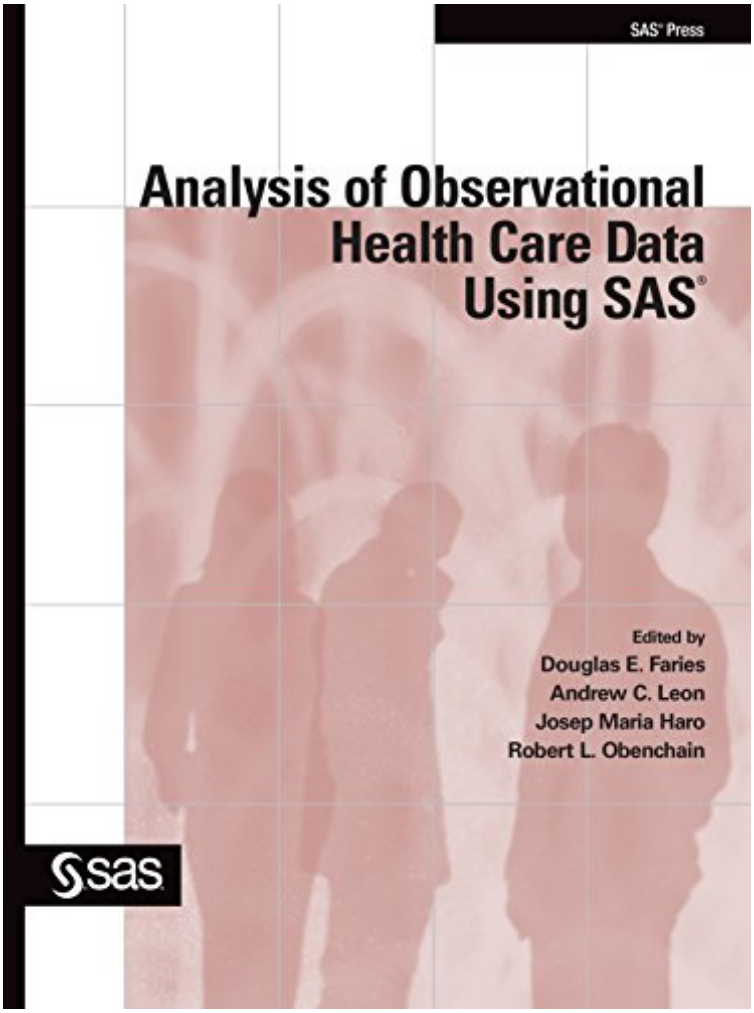

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Douglas Faries, Robert Obenchain, Josep Maria Haro, Andrew C. Leon : Analysis of Observational Health Care Data Using SAS before purchasing it in order to gage whether or not it would be worth my time, and all praised Analysis of Observational Health Care Data Using SAS:

0 of 0 people found the following review helpful. Indispensable for a Particular Kind of SAS Data ScientistBy Aran Joseph CanesAnalysis of Observational Health Care Data Using SAS is a must have text... if you are conducting observational studies with either Propensity Score analysis or instrumental variables. As such, the audience for the book is limited, but within that circle of researchers the work is a much needed contribution to the literature.The theoretical foundations of the primary causal inference techniques in health care are explained thoroughly but without the use of many equations. Those interested in a more theoretical grounding should consult Rubin and Imbens' recent text on causal inference.Beyond an overview of the theory the text is full of SAS macros and code snippets that show how to perform different variations of causal inference techniques in SAS. All the primary forms of Propensity Score

analysis (stratification, matching, weighting, dose effect, etc.) contain code which can be implemented fairly easily. This should save SAS data scientists a good deal of time over having to write their own code to implement these techniques as well as improve the accuracy of their results.Like any text there are areas that could be improved. Since each chapter is written by different authors the basic counterfactual problem of causal inference is stated again and again. A more significant problem is the omission of Coarsened Exact Matching as one of the methods of causal inference. Hopefully, a second edition will correct this oversight.In short, if you apply causal inference techniques in SAS, particularly Propensity Score Analysis, this book is a very useful guide to successful implementation. The SAS macros and other code are alone worth the price of the book.If you don't apply these techniques very often, or you want a more theoretical foundation, this book is not for you. But for a select group of applied scientists this book is indispensable.6 of 7 people found the following review helpful. Really great book!By anonymousI am a masters level epidemiology/biostatistics data analyst and I took a job with a pharmaceutical company doing health claims analyses that are mostly focused on pharmacoepidemiology and health economics. I did not have any specific experience with these types of analyses and this book was a great introduction! Like another reviewer mentioned, it is focused heavily on propensity scores. Each chapter has an applied example and includes all or most of the SAS code required to do the analysis. The chapters are very focused on application and not too too much on the theoretical (as many stats books tend to be). There are sections on claims analysis and pharmacoeconomic analyses, such as cost-effectiveness and incremental net benefit analysis.As far as the level of understanding, this book does assume a biostats and SAS foundation. I thought the authors did a great job at making the book fairly easily comprehended by a masters level biostats person like myself, even though many of these analytic methods are beyond what was explicitly covered in my coursework. I just mention this because I am sometimes unsure about the level of knowledge assumed by these books before purchasing them (you really can't tell by reading a sample of the first chapter, which is almost always extremely introductory!). I have been disappointed by some other SAS publications (eg, healthcare data analysis SAS) that turn out to be way below my level of understanding and I don't come out with much new, useful knowledge.GREAT, GREAT BOOK! I have already recommended it to some of my colleagues.0 of 1 people found the following review helpful. Really useful and practicalBy SophiaThis book was really invaluable in walking me through doing a propensity score analysis. The writing was clear and enjoyable to read, and the sample code was complete and all I needed to get through my analysis. I have about a year's worth of graduate level biostatistics/clinical research training, and would count myself as advanced beginner in SAS, and this book was easily understandable with my level of background. The examples are really useful and relevant to the medical field, and complete! For example,not only do they cover many different methods of propensity score calculation and matching, they then go on to cover all the different types of analyses you can do AFTER you've calculated and matched on your propensity score (e.g., not just how to incorporate propensity scores into logistic regression analyses, but also cox proportional hazards, kaplan-meier curves, etc.) so that you aren't left hanging.This book achieves that rare balance between readability/accessibility, ease of finding exactly what you want, and completeness.

This book guides researchers in performing and presenting high-quality analyses of all kinds of non-randomized studies, including analyses of observational studies, claims database analyses, assessment of registry data, survey data, pharmaco-economic data, and many more applications. The text is sufficiently detailed to provide not only general guidance, but to help the researcher through all of the standard issues that arise in such analyses. Just enough theory is included to allow the reader to understand the pros and cons of alternative approaches and when to use each method. The numerous contributors to this book illustrate, via real-world numerical examples and SAS code, appropriate implementations of alternative methods. The end result is that researchers will learn how to present high-quality and transparent analyses that will lead to fair and objective decisions from observational data.This book is part of the SAS Press program.

"Analysis of Observation Health Care Data Using SAS should be a required reference book available to health outcomes, economics, and epidemiology researchers at all levels, whether they are graduate students or experienced analysts. It contains much practical wisdom; describes the techniques, standards, and pitfalls of analyzing real world data; as well as provides actual computer code that should be immediately useful to analysts of 'real world' health care data. It even has references to publications that have applied such methods. This is a long awaited and much needed book, and I am hopeful that it will serve as a general guidance to improve the quality of research using observational data." --Howard G. Birnbaum, PhD, Principal, Analysis Group, Inc."This book, which is a collection of articles by experts, serves a vital need for a good general book on the subject of observational studies in medicine. The randomized control trial is not the only method of analysis, but observational studies have their special problems. This book concentrates on method such as propensity scoring and instrumental variables, pointing out the advantages and disadvantages of each. The technical level varies from chapter to chapter, but is generally fairly accessible. The chapters all have extensive references, and each has copious SAS code, with comments and output, to illustrate key ideas. If you analyze observational data in the medical field, you will want this book." --Peter Flom, Independent

Statistical Consultant, Peter Flom Consulting, LLCAbout the AuthorDouglas E. Faries is Senior Research Advisor at Lilly USA, where he oversees statistical design and analysis support for Health Outcomes Research, including retrospective claims data analyses and prospective observational studies. A SAS user for more than twenty years, he received his Ph.D. in Statistics from Oklahoma State University and his M.S. in Mathematics from Western Illinois University. Dr. Faries is a member of the American Statistical Association and the International Society of Pharmacoeconomic and Outcomes Research.A SAS user since 1986, Robert Obenchain is Principal Consultant at Risk Benefit Statistics LLC in Carmel, Indiana; Research Fellow at the National Institute of Statistical Sciences in Research Triangle Park, North Carolina; and Adjunct Professor in Biostatistics at Indiana University Medical School in Indianapolis. Previously, Dr. Obenchain worked for thirty-seven years as a professional statistician in the telecommunications (Bell Labs) and pharmaceutical industries (Eli Lilly and Glaxo) doing data analyzes, statistical computing, and methods development. He received his Ph.D. in mathematical statistics from the University of North Carolina at Chapel Hill.Josep Maria Haro is Director of the Saint John of God Research and Teaching Foundation in Barcelona, Spain, which promotes and manages the research of two hospitals, the pediatric Hospital Sant Joan de Deacute;u and the San Joan de Deacute;u-Serveis de Salut Mental, which specializes in treatment of mental health issues. He earned an M.D. from the University of Barcelona, a Master's in Public Health from Johns Hopkins University, and a Ph.D. from University Autonoma in Barcelona. A SAS user since 1990, Dr. Haro is widely published and is a member of International Federation of Psychiatric Epidemiology, the European Congress of Neuropsychopharmacology, the Schizophrenia International Research Society, and the Catalan Psychiatric Society (SCP).Andrew C. Leon was Professor of Public Health and of Biostatistics in Psychiatry at Weill Cornell Medical College in New York City. He was a member of the American College of Neuropsychopharmacology, the American Statistical Association, the International Biometric Society, the International Society for CNS Clinical Trials and Methodology, the International Statistical Institute, and the Society for Clinical Trials. Dr. Leon received his Ph.D. in Educational Psychology from City University in New York. Dr. Leon was published in many medical journals, including the American Journal of Psychiatry and the Journal of Clinical Psychiatry.