

# TEACHING of STATISTICS in the HEALTH SCIENCES

## Cynthia R. Long

### From the Section Chair



Spring is finally here and soon we'll be making our plans to attend the JSM 2006 in Seattle. Most of the Section's program and activities are set, but I'll wait until the

summer issue to list the specifics. We can start thinking about JSM 2007 (to be held in Salt Lake City) though. In particular:

Think about organizing a topic contributed session. If you want assistance or direction, feel free to e-mail me ([cyndy.long@palmer.edu](mailto:cyndy.long@palmer.edu)) or our 2007 Program Chair ([Patrick.M.Tarwater@uth.tmc.edu](mailto:Patrick.M.Tarwater@uth.tmc.edu)).

Think about what CE courses you would like the Section to sponsor. Please contact me or any of the TSHS officers regarding your interests.

Think about roundtable discussion topics you are interested in or want to organize. The 2008 Program Chair is soon to be named and will be interested in ideas to develop for the JSM 2007.

Our Section's focus has always been primarily on the annual JSM. However, I know there are many TSHS members who are unable to get away in early August (especially some of you teaching first year medical students). Are there other activities you would like to see the Section offer? If so, let me know and I'll present your suggestions to our Executive Committee for consideration. In addition, the ASA Strategic Initiative provides seed money for innovative ideas. The next deadline to apply for these funds is only a year away.

Enjoy your spring!

## BOOK REVIEW

**An Introduction to Medical Statistics.**  
Martin Bland. Oxford University Press  
2000 (Third edition). 405 pages, \$42.50  
(paperback) ISBN 0-19-263269-8.



Review by Patrick G.  
Arbogast, Departments  
of Biostatistics and  
Preventive Medicine,  
Vanderbilt University  
Medical Center  
(Pictured)

This is the third edition of the popular textbook on introductory biostatistics. I teach an introductory biostatistics class for a Master of Public Health (MPH) program. This program is for physicians and other doctoral-level health care professionals, and its primary objective is to provide training for clinical and patient-oriented researchers who will conduct non-experimental studies or clinical trials with large sample sizes. I used this textbook for my course this past fall, and my review will be from the perspective of the appropriateness of this textbook for this setting.

The content of the textbook follows the traditional standard for an introductory biostatistics course. It consists of 18 chapters, starting with design of experiments, sampling, and observational studies. It then moves on to summarizing and presenting data, followed by probability distributions and estimation. After that are hypothesis testing, regression and correlation, nonparametric methods, and cross-tabulations. The remaining chapters cover clinical measurement, mortality statistics, multifactorial methods, and sample size.

Bland states in the Preface, "This is a book about data, not statistical theory" and "Only enough

mathematics and formulae are given to make clear what is going on". For me, this was the primary appeal of this textbook. Bland emphasizes concepts and application over formulae and theory. I felt that this was the more appropriate approach for my setting. The students are not being trained to be statisticians, but rather users of data analysis methodologies. Also, Bland uses real data, which makes the subject matter more applicable, approachable, and appealing. For those students more mathematically inclined and interested though, Bland includes appendices at the end of most chapters that provide the mathematical formulae and detail of the topics covered in that chapter. Another aspect of this textbook I liked is the practical advice Bland gives, such as discussing misleading graphs (Section 5.8), parametric vs nonparametric methods (Section 12.7), and choosing an appropriate statistical method (Chapter 14). A personal advantage I found in this textbook is that Bland also includes introductions to linear, logistic, and proportional hazards regression. Though these typically are not covered in an introductory biostatistics course, I do present simple introductions to these methodologies and having it in the textbook provides a useful resource.

As mentioned earlier, I used this textbook this past fall. In the course evaluations, the students gave the book a very favorable review. On a scale of 1-9, 9 being best, Bland's textbook had a median rating of 8 with interquartile range of 6-9. The students found the textbook to be very readable and a useful reference and supplement to the course notes.

In summary, I feel that "An Introduction to Medical Statistics" is an excellent textbook for a graduate-level introductory biostatistics course for physicians and recommend it. However, I would be remiss to not mention other excellent texts of a comparable level including, but not limited to, Altman's "Practical Statistics for Medical Research", Pagano and Gauvreau's "Principles of Biostatistics", and Riffenburgh's "Statistics in Medicine".

### Interesting Sessions at JSM 2006 in Seattle

**Janet Tooze**  
2006 Program Chair



Please join us in Seattle for JSM!

JSM will be August 6 – 10. We have some exciting sessions planned, including:

- An invited session on Tuesday, August 8th at 8:30 am on, "Teaching Biostatistics to Health Care Professionals without Equations"
- A contributed session on Monday, August 7<sup>th</sup> at 2:00 pm on, "Challenges and Innovative Methods for Teaching Biostatistics in the Health Sciences"
- A roundtable lunch on Wednesday, August 9<sup>th</sup>
- Plus, the JSM will be featuring something new this year – coffee roundtables in the morning. Our section will be hosting 2 of these, on Monday and Tuesday mornings at 7 am!

We hope to see you in Seattle!

**2006 Section Officers for TSHS**

|                          |                  |                |  |
|--------------------------|------------------|----------------|--|
| Chair                    | Cyndy Long       | (563) 884-5157 | <a href="mailto:LONG_C@palmer.edu">LONG_C@palmer.edu</a>                           |
| Chair-Elect              | Marlene Egger    | (801) 587-3335 | <a href="mailto:MEGGER@DFPM.UTAH.EDU">MEGGER@DFPM.UTAH.EDU</a>                     |
| Past Chair               | Walter Ambrosius | (336) 716-6281 | <a href="mailto:wambrosi@wfubmc.edu">wambrosi@wfubmc.edu</a>                       |
| 2006 Program Chair       | Janet Tooze      | (336) 716-3833 | <a href="mailto:jtooze@wfubmc.edu">jtooze@wfubmc.edu</a>                           |
| 2007 Program Chair       | Patrick Tarwater | (915) 747-8277 | <a href="mailto:Patrick.M.Tarwater@uth.tmc.edu">Patrick.M.Tarwater@uth.tmc.edu</a> |
| 2006 ENAR Pgm Chair      | Todd Nick        | (513) 636.0462 | <a href="mailto:todd.nick@cchmc.org">todd.nick@cchmc.org</a>                       |
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| Council of Sections Rep. | Lynn Ackerson    | (510) 891-3556 | <a href="mailto:lma@dor.kaiser.org">lma@dor.kaiser.org</a>                         |
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| ASA Staff Liaison        | Monica Clark     | (703) 684-1221 | <a href="mailto:monica@amstat.org">monica@amstat.org</a>                           |

American Statistical Association  
 TSHS Newsletter  
 Ed J. Gracely, Ph.D. Editor  
 Family, Community, and Preventive Medicine  
 Drexel College of Medicine  
 2900 Queen Lane  
 Philadelphia, PA 19129  
 215-991-8466 (phone)  
 215-843-6028 (fax)  
[egracely@drexelmed.edu](mailto:egracely@drexelmed.edu)

**FROM THE EDITOR**

I hope a lot of you are planning to visit Seattle this August for the JSM. TSHS always has a mixer there as well as interesting sessions. Come and meet your fellow teachers of stats in the health sciences!

Enjoy this issue.

As always, if you have something to contribute, send it along!

*Ed*