

# **The American Statistical Association**

## **Section on Teaching Statistics in the Health Sciences**

### NEWSLETTER

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## July 1998 Newsletter

### **From the TSHS Chair: Stephen Looney**

Welcome to the Section on Teaching of Statistics in the Health Sciences for 1998! We have many exciting activities planned for 1998 and I encourage you to participate in as many of them as possible.

As described elsewhere in this newsletter, our section will be sponsoring an invited paper session and a continuing education workshop at the 1998 Joint Statistical Meetings (JSM) in Dallas. I encourage each of you to attend these programs and show your support for our section. You are also invited to the Business Meeting and Mixer, which will be held on Wednesday, August 12 from 6:00 to 8:00 P.M. You will have an opportunity to express any concerns you have about the Section at the business meeting, and there will be BEER, WINE, SOFT DRINKS, and MUNCHIES at the mixer to take care of your hunger and thirst while you mingle with fellow section members. The mixer will begin at approximately 7:00 P.M. Please check the official JSM program to find out where the meeting will be held. I look forward to seeing you there.

I also want to appeal to you to consider presenting a contributed paper at the 1999 Joint Statistical Meetings in Baltimore, Maryland. Only two people submitted contributed paper abstracts to the section for this year's JSM and this is an unacceptably low level of participation for an ASA section. We must improve these figures or we will risk losing our section status. If you have ideas for an invited session or a special contributed session, please contact the 1999 Program Chair, Ralph O'Brien.

This year you will also have the opportunity to nominate a section member that you feel deserves to be a fellow of the ASA. Nominations for ASA fellows can come from sections and chapters of the ASA as well as from individual members. If you know of someone who has made outstanding contributions to statistical education in the health sciences that you feel would be worthy of this honor, please contact me.

We will also be conducting a survey of section members in the near future to get input on how the section can improve its service to you. If you are selected as a survey participant, please take a few minutes to fill out the questionnaire and return it in the postage-paid envelope. We cannot begin to make the section better until we find out what our members really want. In the meantime, if you have particular concerns or comments, contact me or any of the other officers listed on the back.

Another initiative currently underway is the development of a homepage for the section on the World Wide Web. Ralph O'Brien is coordinating this effort and we are asking for your comments and suggestions on what the content and organization of the homepage should be. We are also in the process of developing an electronic repository of learning resources for biostatistics and epidemiology that can be accessed via a link to the section homepage or anonymous ftp. You will be encouraged to make materials that you have developed available to this repository. By sharing our resources, we can significantly increase our ability to provide interesting and meaningful instruction in basic biostatistics and epidemiology to the health professions.



**TSHS BUSINESS  
MEETING AND MIXER**

**WEDNESDAY**  
6:00 - 8:00 P.M.  
August 12, 1998

**From the 1999 Program Chair: Ralph O'Brien**

Planning is underway for the 1999 Joint Statistical Meetings to be held August 8-12 in Baltimore. Themed "Statistical Science at the Interface," the conference will celebrate how collaborating with investigators in all fields leads to advances in statistical theory and methods. Of course, TSHS members are always focusing on teaching and consulting at our interface, the biological and health sciences. What aspects of this should TSHS highlight for the 1999 JSM?

Close to my heart is one activity that is pivotal to our success: Communicating to Non-Statisticians. How do we best report statistical plans and analyses to audiences of other health scientists, clinicians, policy makers, and the general public? Every technical aspect of a study may be done in exemplary fashion, but nothing is accomplished until the right groups of people come to understand sufficiently what we have done and what we have found. In this critical final stage, we statisticians fall short of excellence too often.

What are the components of effective statistical communication and how might we teach them better?

It is not enough to just pronounce that technical writing should be clear and concise. We have to do it! Most of us have learned the hard way that oral presentations should be designed knowing the limitations of transmitting technical material in this manner--and that we need to be a little entertaining as well. Our field is finally understanding that strong statistical graphics should "Show the Data" as much as possible (the "micro" view) yet illustrate the key findings of our analyses (the "macro" view). Designing tables deserves the same creative energy in terms of their structure and labeling. And we remind ourselves that a graph or table that is wonderful for an article may be awful for an oral presentation. These are all easy guidelines to state, but they are different to meet in practice. Succeeding or failing here can make or break the impact of a study.

How do we teach these skills? I propose that we put strong elements into our program to address this question. What might those elements be?

I have gotten a preliminary commitment from Tom Lang and Michelle Secic to teach a half-day workshop that would be based upon their new book, *How to Report Statistics in Medicine*, which I highlight elsewhere in this newsletter (p. 3). At the upcoming JSM in Dallas, I will float this notion to the TSHS executive committee to see if we should sponsor it, just as the Section has sponsored the nQuery Advisor & UnifyPow workshops in 1997 & 1998.

I need to submit at least one invited-paper session to the ASA by mid-July, and I am hoping to assemble something with this Communications focus. One notion would be to have experts discussing how we can better teach the following: (1) writing for non-statistical audiences, (2) speaking to non-statistical audiences, (3) creating modern statistical graphics for publication and presentation, and (4) designing more effective tables. Those attending such a session should leave with firm ideas and suggested readings and exercises to use in their own curricula, whether for the classroom or for on-the-job training.

Do you have other ideas for sessions? Any and all topics are welcome! We can submit more than one proposal for an invited session. Even sessions that do not get accepted as "Invited" can be submitted later as "Special Contributed." Write me immediately with your ideas. Please!

### **Workshop: Sample Size**

Last year's TSHS-sponsored full-day workshop on sample-size analysis was quite successful. Janet Elashoff featured nQuery Advisor, a stand-alone product for Windows 3.1 or higher (\$675 list, \$475 academic; [www.statsol.ie/nquery.html](http://www.statsol.ie/nquery.html)). I covered UnifyPow, a freeware module/macro for the SAS System, which runs on numerous platforms ([www.bio.ri.ccf.org/UnifyPow](http://www.bio.ri.ccf.org/UnifyPow)). Janet and I traded the podium back and forth in front of about 90 enrollees, apparently the largest Continuing Education session of the meeting. It was great fun and our course evaluations were gratifying and helpful. Accordingly, the TSHS Section and ASA's CE Advisory Committee welcomed us back for a second year. The CE people wisely requested that we split the program into two half-day workshops, because many prospective attendees are only interested in either nQuery Advisor or UnifyPow, not both. This format will also avoid dead time by not switching back and forth. Janet and I will moderate each other's workshops, so that we can again keep things lively with some good-natured commentary. Janet's nQuery Advisor half-day workshop will be on Tuesday morning (August 11, 8am-noon). In the afternoon (1pm-5pm), I will cover UnifyPow, including debuting some new functionalities. The fee for ASA members registering by July 10 is \$60 for either course or \$100 for both.

### ***How to Report Statistics in Medicine***

Let me beat the drum for my Cleveland Clinic colleagues Tom Lang (a medical technical editor) and Michelle Secic (a biostatistician). Their new book *How to Report Statistics in Medicine* fills a real need and is getting some great reviews. Nadine W. Martin, from Centers for Disease Control and Prevention, recently concluded the following in *JASA* (March 1998):

Lang and Secic do a masterly job of taking a subject that intimidates (and terrorizes, to some extent) many people and sweetening it so that it is palatable. This book should be on every medical writer's and editor's desk (and many authors would benefit by it, too) to be read from cover to cover and used as a reference. I also recommend that it be used as a text for journalism students and science writers, or by anyone who does not plan to become a statistician yet needs to be able to interpret and report statistics. My thanks to the authors for producing an outstanding guide . . . They have performed a public service for us, for the general public, and for science.

Not bad, eh? I'd only add that I think that many practicing biostatisticians could also profit from reading this book, especially those just entering the world of medical research. Just doing solid statistical work is not enough; we have to be able to report that work effectively.

To order, call the American College of Physicians at 1-800-523-1546 (ext. 2600). The ISBN number is 0-9431-2644-4 and the cost is \$39.95.

### **Thank You From TSHS Chair**

I would like to express my appreciation to several individuals who have made my job as Section chair this year much easier. First of all, Todd Nick has done an excellent job as Editor of this newsletter, after being asked to do the job on very short notice. Dan Freeman did a fine job this year as Program Chair. Ralph O'Brien and Rui Wang have spent a considerable amount of time developing the homepage, and Steve Verhulst has provided valuable advice on the various publications associated with the Section. In

the ASA office, Steve Porzio has been very patient with me on budget matters and Sue Kulesher has been a valuable liaison with the ASA staff. Without the help of these individuals and others, we would not have been able to move the section forward. Thanks again to all of you.

## **TSHS Website**

Please go to the Sections area of the ASA's ever-growing, ever-improving website ([www.amstat.org](http://www.amstat.org)). Last, but not least, TSHS now has a link! The webmaster for our site is Ms. Rui Wang of the Cleveland Clinic's Department of Biostatistics and Epidemiology, which has volunteered to become the permanent host.

Our site can only develop fully and stay current if TSHS members contribute to it. Of special interest is an area to coordinate the sharing of teaching/learning materials. This area will provide links to anything that might help us teach: freeware and software, data sets (with documentation), course syllabi, notes and handouts, etc. Think about contributing to this page. The site also contains the results from the ASA's salary survey of academic biostatistics departments.

Contact Rui and Ralph O'Brien at [TSHS@bio.ri.ccf.org](mailto:TSHS@bio.ri.ccf.org) if you have comments, problems, or if there is something you would like to see added.

## **1998 Invited Session**

Tuesday, August 11, 2:00-3:50 P.M.

THE TITLE:

**Should We Only Teach Them What They Need to Know to Pass the Boards?**

THE TALKS:

- ε **What They Test and Why** By Beth Dawson, Southern Illinois U.
- ε **The Use of Targeted Lectures and Small Groups For Teaching Statistics to Medical Students** By Dan Freeman, Billy Phillips, and James Hokanson, University of Texas Medical Branch
- ε **10,000 Monkeys Can Get a Perfect Score on the National Boards □ Can You?** By James R. Murphy, University of Colorado Health Sciences Center

All abstracts can be found on ASA's website at [www.amstat.org](http://www.amstat.org).

## **1998 Section Officers for TSHS**

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### **Congratulations!**

A BIG pat on the back for these deserving statisticians . . .

TSHS Chair □ 2000 A.D.; ringing in the new millenium will be Ralph O'Brien, Cleveland Clinic  
1997 TSHS Best Contributed Paper Award goes to Stephen Simon, Children's Hospital  
1997 TSHS Best Special Contributed Paper Award is none other than Scott Emerson,  
University of Washington

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