

ASA Section on Teaching of Statistics in the Health Sciences: 25 Years Later

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Abstract

ASA's Section on Teaching of Statistics in the Health Sciences was established as a subsection of the Section on Statistical Education in 1970, and became an independent section in 1991. Stephen Looney, Todd Nick, Ralph O'Brien, Bob Oster and others led the section's early growth in the mid-to-late 1990s. Sessions and continuing education courses were organized at JSM, the newsletter was modernized, and a first website was established. In the early-to-mid 2000s, Ruth Mickey, Walter Ambrosius, Cyndy Long, Ed Gracely, the late Patrick Arbogast, Jodi Lapidus, and Scott Evans added their own efforts in strengthening section activities. It was during this time that section-sponsored roundtables were introduced at JSM, the section's major awards were established, and the section's newsletter became electronic. Today, the section numbers almost 700 members from more than two dozen countries, with a strong presence of students and recent graduates. It has a strong presence at JSM, a modern website, and is developing a teaching resources portal in collaboration with CAUSEWeb. Future initiatives may focus on mentoring, student engagement, and closer work with other ASA entities focused on education.

Website: <http://community.amstat.org/TSHS/Home/>

The 1960s and 1970s: the early years

1967 – Informal medical statistics group within ASA's Training Section (now Section on Statistical Education).

1969 – Biostatisticians' meeting at JSM to discuss teaching of statistics in the biomedical sciences.

1970 – Formation of **Subsection** on Teaching of Statistics in the Health Sciences (TSHS) within the Section on Statistical Education

First chair: **Anita Bahn** (NCI, NIMH, UPenn)

Issues of interest:

- How, when and by whom are statistics taught in medical schools? Survey of medical schools in the US and Canada (Ted Colton & Jan Kuzma, 1975).
- What topics should be included in a medical statistics course? Recommendations (Alvan Feinstein et al., 1975) and textbooks (Anita Bahn: *Basic Medical Statistics*, 1970; Ted Colton: *Statistics in Medicine*, 1974; Alvan Feinstein: *Clinical Biostatistics*, 1977).
- Statistics questions on the National Board of Medical Examiners' examination for medical certification (now the USMLEs, as of the early 1990s). Permanent biostatistician member on the board for preventive medicine and public health.

Activities

- Sessions at JSM.
- Newsletter published and mailed to subscribers.

The 1980s: growing up

Issues of interest:

- Updated survey of medical schools' statistics curricula (Beth Dawson-Saunders, Stanley Azen, Raymond Greenberg, and Allen Reed, 1987).
- Interactions between statisticians and biomedical researchers (collaborations and consultations).
- Statistical review of manuscripts in medical and nursing journals.

Activities:

- Printed and mailed newsletter, edited by **Steven Verhulst** (Southern Illinois U), 1987-1994.



Beth Dawson-Saunders
Southern Illinois U



Stanley Azen
U of Southern California



Stan Lemeshow
*U of Massachusetts;
now at Ohio State U*



Ralph O'Brien
*Cleveland Clinic; now at
Case Western Reserve U*



Stephen Looney
*U of Louisville; now at
Medical College of Georgia*



Bob Oster
U of Alabama



Scott Evans
Harvard U



Ed Gracely
Drexel U



Cyndy Long
Palmer College of Chiropractic

The 1990s: independence

1991 – Formation of **independent Section** on Teaching of Statistics in the Health Sciences (TSHS)

Coincided with the time of ASA reorganization, new constitution, institution of section dues

Issues of interest:

- Standards for biostatistics graduate school curricula and for basic biostatistics service courses in medical centers.
- Computers in the classroom.

Activities

- Invited and contributed sessions, panels and lunch roundtables at JSM.
- Newsletter continued in print form and mailed to members. Turnover of editors: Michael Symons (U of North Carolina at Chapel Hill), 1995-1996; Todd Nick (U of Mississippi; now at U of Arkansas), 1998; **Stephen Looney** (U of Louisville, now at Medical College of Georgia), 1999-2004. In the mid-1990s, **Peter Imrey** (Cleveland Clinic) first proposed a transition to a computerized newsletter, but this would not be implemented until the mid-2000s.
- Support for the launch of the Journal of Statistics Education.

Late 1990s – Decrease of section activities at JSM, poor attendance at section's Business Meetings, declining interest in subscription to section's newsletter

<p>Using Computers in the Classroom Peter A. Lachenbruch, Ph.D., UCLA</p> <p>New Options in the Classroom</p> <p>With the advent of the microcomputer we have greatly expanded choices of computing in the classroom. It is often useful to distinguish between the service courses from the courses designed for majors. Most of what I say is related to the service courses, but also has direct carry-over to the courses for majors. We have the possibility of showing many statistical, computing, and documentation skills that our students can find useful.</p> <p>These include displaying the use of statistics programs: we can show many options, although we can move far too rapidly through the options. For example, in demonstrating a regression analysis program, we can</p>	<p>THE JOURNAL OF STATISTICS EDUCATION</p> <p>E. Jacquelin Dietz North Carolina State University</p> <p>The <i>Journal of Statistics Education</i> (JSE) is a new rigorously-refereed electronic journal on postsecondary statistics education. JSE publishes high-quality articles on a variety of topics related to the teaching of statistics, for instance, results of controlled experiments on pedagogical methods, case studies and anecdotal reports, review and opinion articles, and discussion of the impact of new technologies and new methods of assessment on statistics education. Articles that make innovative use of the electronic medium are encouraged.</p>
(Fall 1992 newsletter)	(Fall 1993 newsletter)

The 2000s: maturation

Early and middle 2000s – A new group of volunteer leaders (including **Ralph O'Brien**, **Stephen Looney**, **Bob Oster** and others) re-energized and stabilized section activities.

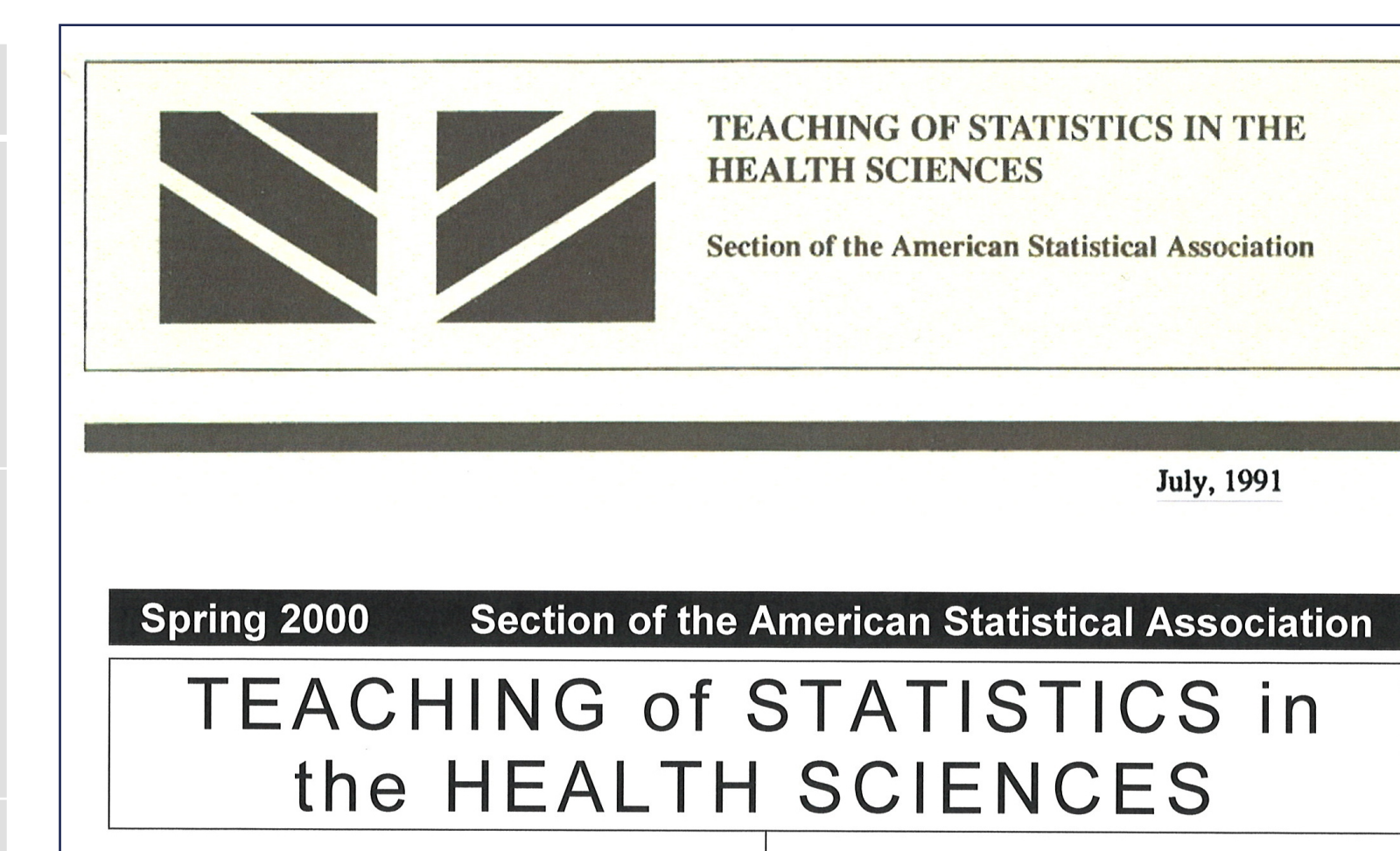
Issues of interest:

- Distance/online education
- Technology in the classroom
- Statistical literacy
- Links between consulting and education

Activities:

- Workshops and continuing education courses at JSM. Organized by **Ralph O'Brien** in the early/mid-2000s.
- Webinars and short course. Organized by **Scott Evans** in the late 2000s.
- Modernization of newsletter. **Stephen Looney** (editor, 1999-2004) modernized the look of the newsletter, which soon became electronic and emailed to members. He was succeeded as editor by **Ed Gracely** (editor, 2005-present) who updated the newsletter's format and instituted posting it on the website.
- Establishment of section website. Hosted at the Cleveland Clinic until 2011, and overseen by **Ralph O'Brien**. Recently modernized, hosted by ASA, and managed by **Constantine Daskalakis**.
- Establishment of section's major awards (Distinguished Achievement Award, Outstanding Teaching Award, Young Investigator Award) in the middle/late 2000s, under the initiative of **Bob Oster**, **Cyndy Long**, and **Jodi Lapidus**.
- Networking of isolated biostatisticians, organized by **Cyndy Long** during 1999-2001.
- Participation in ASA's Education Council.

Total membership:	665 (as of 1/6/2014)
Location	
U.S.A.	596 (90%)
Canada	26 (4%)
Other countries	43 (6%)
Membership type	
Regular	451 (68%)
Student/recent graduate	126 (19%)
Other (senior, life, etc)	88 (13%)
ASA Fellow	57 (9%)



Newsletter nameplates in the 1990s and 2000s.

The future...

Issues of interest:

- Teaching resources online portal (in collaboration with *CAUSEWeb*)
- Mentoring (in coordination with ASA's Committee on Applied Statisticians)
- Student engagement