April 1997

Joint Biostatistics and General Applications Program and Stanford Biostatistics Workshop

"Regression Methods for Data from Epidemiological Studies of Heterosexual HIV Transmission"

Stephen Shiboski
Department of Epidemiology and Biostatistics
University of California
San Francisco, CA

Abstract

Infection outcomes from studies of heterosexual transmission of HIV are often subject to interval or double censoring, posing challenges to estimation and inference. I will present some recent regression approaches for investigating covariate effects and hazard estimation in this setting, using data from three CDC-sponsored studies of transmission in partners of previously infected individuals for examples. In addition, I will discuss inherent limitations of such studies in providing information about important features of the transmission process, such as variations in infectiousness and susceptibility.

Date: Thursday, April 17, 1997
Time: 3:45 - 4:15 PM Coffee
4:15 - 5:15 PM Talk
Place: Coffee: Statistics lounge on the third floor
Margaret Jacks Hall, Building 460 in the center of the Outer Quadrangle facing the Oval
Talk: Room 30, Building 200, the History Corner of the Stanford Quadrangle

Dinner for the speaker will follow at 6 PM

Directions: A map of the Stanford campus is available at
http://www.stanford.edu/home/visitors/campus-map.html. See the following directions.

Directions to Talk at Stanford:
Park in the lot that surrounds 855 and 857 Serra Street. Be prepared with quarters for parking meters. Marked constraints on parking are enforced until 5 PM.
From 101 take the University Avenue off ramp and head west from the freeway. Stay on University Avenue through Palo Alto. About two miles from 101 the street becomes Palm Drive, and you enter the Stanford campus.
Come up Palm Drive and turn left onto Campus Drive East. Take the third right onto Serra Street. The parking lot that surrounds 855 and 857 Serra Street is on your right.
From 280 get off at Alpine Road and head east (towards the Bay, not the hills). Turn right at the light onto Junipero Serra. Turn left at the second traffic light (intersection of Campus Drive East and Junipero Serra.). In about six blocks, at the corner of Serra Street and Campus Drive East, turn left, and follow the instructions above.
From El Camino Real, turn into Stanford at Palm Drive and follow the instructions above.

To Refreshments and Talk
Walk away from the direction of Campus Drive East, past tennis courts, Arguello Way, and Galvez Street, all on your right, and the Hoover Tower on your left. Almost immediately you come to the corner of the Quadrangle, to Building 200 where Dr. Shiboski's presentation is. To get to the refreshments, continue down the edge of the Quadrangle, past the center, to Margaret Jacks Hall and the Department of Statistics. Take the elevator or walk to the third floor for the refreshments.

Employment ads are now $50 per insertion. Please contact chapter secretary.
OPEN POSITIONS:

**Statistician**

UCSF Dept. of Medicine
Division of Rheumatology

50-100% effort (depending on experience and salary level). The major duty of this job is to serve as the statistician for an ongoing genetic epidemiology of rheumatoid arthritis project. The project components include longitudinal patient information, physician surveys, genotyping data, radio-graphic data, medical record information, and family histories (i.e., pedigrees). This job requires analysis (e.g., PROC MIXED, GEE macro). This job also required familiarity with PC hardware and software. This individual must have a master's degree in statistics (or a closely related field), or extensive previous statistical analysis experience. Preferred skills include experience or a strong interest in genetic epidemiology, including analysis of family (pedigree) data, and excellent writing skills. Experience with Access (Part of Microsoft Office) and/or Cyrilic (pedigree) software is desirable. Comfort with computer software and hardware upgrades, internet access, and networking is also desirable.

This job will involve close interaction with the Principal Investigator, and with other staff involved in data collection, entry and cleaning. Examples of analyses planned for the first six months include: the relationship between genetic factors and long-term clinical outcomes, interactions between genetic and environmental factors and disease susceptibility, and relevance of genotype to clinical decision making.

For further information, contact Lindsey Criswell at Tel: (415)476-9026, FAX:(415)476-9370, or e-mail: lac@itsa.ucsf.edu.

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**Statistician:**

In this fast-paced environment, you'll assist project teams within LifeScan in designing test protocols, statistical analysis and presentation of data. Utilizing appropriate statistical and analytical techniques, your problem solving skills will be needed to assist management in making critical decisions.

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Utilizing your technical skills in Statistics and SAS programming, you will work primarily with statisticians in developing and validating applications within the Statistical Support Group. You will be involved in creating SAS applications for product development, manufacturing support, and clinical studies, as well as assist in statistical analysis of data.

Requires a BS or MS in Statistics, or equivalent, with 3+ years' experience in SAS programming. You must be proficient in SAS STAT, BASE, MACRO, GRAPH, and IML. You must be a proven team player and possess excellent written and verbal communication skills. **JOB CODE SFASS97-2**.

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measure end-to-end Internet performance as experienced by real users. We enable the Internet community to improve their quality of service, including reliability and performance. Our customers include four of the top five Internet Service Providers and major Internet-enabled applications vendors, including Intuit and WebTV.

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We are looking for full or part time consultant(s) with a strong statistics background. The job could convert to full time employment. The company collects data about Internet performance and diagnostics. The data consists of millions of data points that need to be analyzed on an ongoing basis and the statistical implications of the measurement and interpretation techniques understood. Based on this analysis we will refine our measurement and analysis techniques, and be able to optimize the data collection.

**Requirements** are a BS in Mathematics or Statistics or equivalent and statistical data analysis experience. It would be desirable for the candidate to have:

- practical experience in analyzing real-world data, experience in analyzing network data and in using databases and/or spreadsheets to analyze and visualize the data.
- Also desirable would be an MS in Statistics or equivalent and programming experience.

**Contact information:**
Fax your resume to 408-486-6050 or email it to jobs@inversenet.com
We will contact you as soon as possible.

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**May 1997**

**Joint Biostatistics and General Applications Program and Stanford Biostatistics Workshop**

**“Recent Developments in Survival Distribution”**

*Chin Long Chiang*

*University of California Berkeley, CA*

**Abstract**

Two survival distributions will be proposed in this presentation. They are tentatively entitled: (1) Survival and stages of diseases, and (2) A yet unnamed distribution.

(1) Survival and stages of disease --- The development of many chronic conditions is characterized by stages. Generally, diseases advance with time from a primary condition through intermediate stages to advanced stages, to death. The process often is irreversible but a patient may die while being in any one of the stages. In the natural development of cancer, for example, there are stages of the disease determined by the and size of tumor and metastasis of cancer. AIDS also develops in stages. Explicit formulas will be presented for the density function, the distribution function, and moments of the distribution. Maximum-likelihood estimation of the parameters will be discussed.

(2) The yet unnamed distribution - There are two forces acting on a person to influence his survival and death. One force causes the force of mortality to increase, while the other force causes the force of mortality to decrease. A survival density function based on the interaction of the two forces will be proposed. Application of the distribution to the estimation of time to tumor will be presented.

**Date:** Wednesday, May 7, 1997

**Time:**
- 3:30 - 4:00 PM Coffee
- 4:00 - 5:00 PM Talk

**Place:** Room SU 1325, Cal State University, Hayward

Dinner for the speaker will follow at 6 PM

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