



EPIDEMIOLOGY

Purpose: To encourage Health Science students to study the effects of health and disease in populations, to improve their scientific literacy, and to provide insights into public health careers.

Description of Event: This event shall be a written examination of concepts related to the study of epidemiology. Competitors shall be expected to recognize, identify, define, interpret and apply these concepts in a 50-item multiple choice test and in written responses to a case study.

Dress Code: Competitors must be in official HOSA uniform or in proper business attire. Bonus points will be awarded for proper dress.

- Rules and Procedures**
1. Competitors in this event must be active members of HOSA in good standing in the category in which they are registered to compete (Secondary or Postsecondary/Collegiate).
 2. The test shall be developed from the National HOSA test item bank and will consist of fifty (50) multiple-choice items, AND a case study consisting of between five (5) and twenty (20) short answer questions worth 50% of the final total score.
 3. The official references for the development of all test items and the case study will be entirely web-based.

- **EXCITE! Website** <http://www.cdc.gov/excite/index.htm>
- **Young Epidemiology Scholars**
<http://www.collegeboard.com/yes/ft/iu/framework.html>
- **Detectives in the Classroom**
<http://www.montclair.edu/Detectives/index.html>
- **Emerging and Re-emerging Infectious Diseases**
<http://science-education.nih.gov/customers.nsf/HSDiseases.htm>
- **CDC: Disaster Epidemiology and Assessment**
<http://www.cdc.gov/nceh/hsb/disaster/default.htm#pubs>

4. The test plan for the multiple choice items is listed below and separated by website:

EXCITE! website

- Careers in Public Health 10%
- An Introduction to Epidemiology 8%
- Steps of an Outbreak Investigation 8%

Detectives in the Classroom website

- Epidemiology Backgrounds and Essential Questions 6%
- Curriculum Investigations 10%

Young Epidemiology Scholars website

- Intellectual Framework and Vocabulary 8%
- Adolescent Suicide: The Role of Epidemiology in Public Health 2%
- Attributable Risk Applications in Epidemiology 2%
- Epidemiology and Public Health Policy: Using the Smoking Ban in New York City Bars as a Case Study 2%
- Should the Population be Screened for HIV? 2%
- Testing Ephedra: Using Epidemiological Studies to Teach the Scientific Method 2%

Emerging and Re-emerging Infectious Diseases (NIH website)

- Understanding Emerging and Re-emerging Infectious Diseases 20%
- Deadly Disease Among Us 2%
- Disease Detectives 2%
- Superbugs: An Evolving Concern 2%
- Protecting the Herd 2%
- Making Hard Decisions 2%

Disaster Epidemiology and Assessment (CDC website)

- CDC Activities 10%
 - Mission, goals and objectives
 - Application and service in disaster settings: surveillance and rapid needs assessment
 - Applied research to prevent injuries, illnesses and deaths
 - Consultation and training
 - Field investigations

5. In addition to the multiple-choice items, competitors will apply their knowledge of epidemiology and investigative skills to an epidemiological scenario in the form of a case study. The written case study will be a part of the test packet, and will include background information about a selected public health situation and a series of short answer questions about the case study. (Two case study examples are at <http://www.cdc.gov/excite/classroom/index.htm#exercises>. The actual case study used in HOSA competition will be a secret problem.)
6. One section of this event shall be scheduled for secondary and one for postsecondary/collegiate competitors. Tests at each level may be different. Competitor numbers will be pre-assigned.
7. All competitors shall report to the site of the event at the time designated for the event orientation. The test will immediately follow the orientation. **No proxies will be allowed for the orientation.** No study materials are allowed in the room.
8. All competitors will be given a test with the test items and case study turned face down. The competitors will be given instructions and required to enter their competitor number and level on the cover sheet of the test, as well as on the scantron answer form. After instructions have been given to the competitors, they will be notified to start the test. There will be a maximum of two (2) hours to complete the test and case study. Competitors should leave the testing site promptly after completion of the test.
9. The tie-breaker will be the highest test score. In the case of a tie in the test score, the process outlined in Rule #47 of the General Rules and Regulations will be implemented.

10. Competitors must be familiar with and adhere to the "**General Rules and Regulations of the National HOSA Competitive Events Program.**"

Required Personnel (Per Section): (SS level event; PS/C level event) No sections within levels.

1. One Event Manager (per event)
2. One Section Leader
3. Two to three Proctors
4. Two Courtesy Corps Members
5. One - Two judges per section

Facilities, Equipment and Materials (Per Section):

1. One room to accommodate the total number of competitors
2. Tables/chairs or schoolroom desks/chairs for total number of competitors
3. Table/chairs for event personnel to provide for registration, grading of tests and distribution of materials
4. Key for judging the case study portion
- *** 5. Number 2 lead pencils with eraser and ink pens (blue or black ink only) brought to event by competitor (competitors may either use pen or pencil in responding to case study questions.)
6. Test packets pre-numbered and Scantron answer forms
7. Answer keys
8. Scantron machine (if not graded by hand)

*** Equipment to be brought to event by competitor.

Event Flow Chart

