

Alert:

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National winners for 2004-05 YES Competition announced in grand fashion in Washington, D.C.

Sixty high school students from 30 states traveled to the nation's capital in early April to compete in the regional and national finals of the Young Epidemiology Scholars (YES) Competition. College scholarships were awarded to all, including two first-place scholarships of \$50,000 each.

After two days of project presentations and discussions, the national winners were chosen by a panel of judges that included some of the nation's top epidemiologists and educators.

Many other national scholarship programs reward students for their academic achievement and service activities. However, few reward students for what the YES Competition

does—for students' ability to solve problems in real-world settings.

"The YES Competition challenges students to tackle important health questions by employing the same skills used by professional epidemiologists," says Dr. Risa Lavizzo-Mourey, president and chief executive officer of the Robert Wood Johnson Foundation. "They clearly met the challenge. We can't wait to see the places they will go and the things they will do to make a difference in this world."

Supported by the Robert Wood Johnson Foundation and the College Board, the competition is designed to inspire students to investigate the many behavioral, biological, environmental and social factors that affect health and, based on this knowledge, to identify ways to improve the health of the public. "I was surprised at how much the field of epidemiology encompasses," says Casidhe Horan of Richmond, Virginia, who received a \$20,000 scholarship. "It involves chemistry, biology, ethics, communications, economics, history and environmental science. It's the perfect career for someone like me who doesn't want to focus on just one thing."

Almost 650 students nationwide entered the competition by submitting research projects proposing solutions to health-related problems. A total of \$456,000 in scholarships was awarded to 120 students over the course of the competition.



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**Risa Lavizzo-Mourey,
M.D., M.B.A.**
*President and
Chief Executive Officer
The Robert Wood
Johnson Foundation*



Young
Epidemiology
Scholars

Visit www.collegeboard.com/yes

Read more about the students and view their abstracts online at www.collegeboard.com/yes

First Place \$50,000 Scholarship



Jessica Cohen, Roslyn Heights, NY

The Impact of Condom Education on High School Students

"I have long been aware of the politics surrounding sexual health education. I sought to bridge my interest in public policy and health education with this project."



Andreea Seicean, Bay Village, OH

A Significant Association Between Short Sleeping Hours and Teens Overweight/Obesity: Results from Bay High School

"I was interested in how sleep behaviors may modify general health after observing family members and friends. They were sleeping fewer hours over different periods of time and their weight fluctuations were manifest."

Second Place \$35,000 Scholarship

Gregory Bruich, La Jolla, CA

Fatal Motor Vehicle Accidents Increase after the Fall and Spring Time Changes

Joshua Pepper, Fresno, CA

Asthma Disparities in Fresno Unified School District: Mapping Socioeconomic Status and Prevalence

Third Place \$20,000 Scholarship

Jamie Bell, Durham, NC

The Freshmen Nutrition and Exercise Study

Casidhe Horan, Richmond, VA

The Epidemiology of Teen Pregnancy in Virginia: Indications for Prevention and Health Care

Bring an epidemic into your classroom.

Visit www.collegeboard.com/yes to download the YES teaching units. The following are just a few of the units available:

Testing Ephedra: Using Epidemiological Study to Teach Concepts of the Scientific Method

Epidemiology and Public Health Policy: Using the Smoking Ban in New York City Bars as a Case Study

Mortality and the Transatlantic Slave Trade

Alpine Fizz and Male Infertility: A Mock Trial

Classroom Alert: Measures in Epidemiology teaching unit meshes well with existing classes.

Chris Olsen

Mathematics Department
George Washington High School
Cedar Rapids, IA

Over the last two years, Chris Olsen has been part of a team that developed the YES program's teaching units. He has also incorporated many of those units in his AP Statistics courses, including **Observational Studies and Bias in Epidemiological Research, Case Control Study, and Screening and Diagnostic Tests.** He shares his thoughts on incorporating one of the YES modules, **Measures in Epidemiology.**

Q: Can you describe the Measures in Epidemiology unit?

A: It provides students with an elementary understanding of how observations are translated into measures of incidence (the rate at which new cases arise) and prevalence (the proportion affected at a point in time). Students learn to relate the two to potential causes or risk factors in order to determine associations between potential causes and effects.

Table 1: Bottom line effects: exposure and outcome (10)

Treatment	Outcome at 10 year	
	Dead	Alive
Exposed (n=1325)	404	921
Not exposed (n=1325)	350	97

National Finalists \$15,000 Scholarship

Shubha Lakshmi Bhat, West Chester, PA

Impact of Sun Safety Awareness on Adolescent Sunburn Incidence: A Three Year Study

Molly P. Burges, Gainesville, FL

Breathless for Power: Evaluation of the Effect of a Coal-Fired Power Plant on Asthma Rates in Children

David Gershel, Bedford, NY

The Epidemiology of Heat Illness Among High School Athletes and their Awareness of Prevention Strategies, Risk Factors and Signs and Symptoms

Andrew Iliff, Stillwell, KS

Performance Enhancement Supplement Usage by Teenagers: A Primary Survey of the Prevalence, Variety and Duration of Performance Enhancement Supplement Usage by Teens During High School

Allison Roggenburg, Ankeny, IA

The Study of Acne in a Suburban Midwest School

Peter J. Rossi, New Port Richey, FL

Approaching an Epidemiological Understanding of Rapidly Progressive Atherosclerosis

Regional Finalists

48 students received \$2,000 scholarships

Regional Semifinalists

60 students received \$1,000 scholarships

12 national winners



Q: When would students be ready for this teaching unit?

A: Although I incorporated this one in my AP Statistics course, Measures in Epidemiology could even be added to ninth grade courses. Some of the other teaching units are more complicated and involve techniques like Bayes' Theorem, but this module just requires an appropriate algebra sequence.

Q: What surprised you the most after incorporating the Measures in Epidemiology unit in your classroom?

A: My students already had an interest in math and science, but I could tell that their interest was heightened by the medical and health-

related content. The Measures unit gave them a much better understanding of statistics as well as its real-world application in an important field.

Q: Why is it important to bring these lessons into the classroom?

A: Before I started working with the teaching units, I could spell epidemiology and that was about it. I realize now that it's important for students to understand these concepts and how they play out in real life. For example, my students now have a greater understanding of what happens when they visit a doctor—the inferences that doctors make in order to provide a diagnosis.

Q: How much preparation time should a teacher set aside?

A: A teacher should be able to read through it and be able to talk about the concepts fairly quickly.

Q: What's the most important thing for teachers to know about this teaching unit?

A: My comments really apply to all of the units, not just Measures in Epidemiology. The YES program offers a great number of teaching units that cover a variety of topics, and these units can be dropped into a variety of subjects like math and biology. A teacher doesn't have to create an entirely new course or sacrifice their state-mandated curriculum. They can pick and choose various modules to add at different times.

Visit www.collegeboard.com/yes

2005-06 Competition

Guidelines available
June 8, 2005

Online registration available
July 1, 2005

Online submission deadline February 1, 2006 by 5:00pm ET

Regional and national event
April 21-24, 2006

One judge reflects on this year's YES Competition.

Jonathan Samet, M.D., M.S.

Professor and Chairman
Department of Epidemiology
Johns Hopkins Bloomberg School of Public Health



Dr. Samet, a physician and epidemiologist, is trained in internal medicine and pulmonary disease. His research has addressed the effects of environmental agents on health, particularly the consequences of air pollutants indoors, outdoors and in the workplace. At Johns Hopkins, he is Director of the Institute for Global Tobacco Control and Co-Director of the Risk Sciences and Public Policy Institute. He has served as President of the Society for Epidemiologic Research and of the American College of Epidemiology. He is past editor of the *American Journal of Epidemiology* and is currently editor of *Epidemiology*.

Dr. Samet's current research attempts to advance understanding of the public health consequences of air pollution. He and his colleagues at Johns Hopkins Bloomberg School of Public Health are evaluating the effects of long-term exposure to particulate matter on morbidity and mortality, and they're developing better models for tracking air pollution's effects on health. The project is funded through 2006 by the Environmental Protection Agency (EPA) STAR program.

Q: Why do you think the YES Competition is important?

A: As high school students begin focusing on their future career choices, many will be thinking about medicine. However, they're likely to know little about the importance of public health and even less about epidemiology. This competition is creating greater awareness of this important field as well as creating a new pipeline of aspiring public health professionals. Epidemiology has always been important to society. Now it's important that it become better recognized by the public.

Q: What impressed you most about the competition?

A: I think it's quite remarkable that there are so many high school students who now know about epidemiology. Even more important, though, they're carrying out difficult projects that are making a real scientific contribution.

Q: This is one of the few scholarship programs where students compete to win a scholarship. What were your impressions of the competitors?

A: These are amazing students. To analyze so much data and complete these complex projects, they have to be motivated. To get far in the competition, they have to communicate effectively and think clearly. They've proven that they're incredibly talented.

Q: How did you come to be involved with the YES Competition?

A: During the first year of the program, I received an invitation and was intrigued by the program and the opportunity to get more high school students interested in epidemiology. I served as a regional and national judge the first year, and this year I served as co-lead judge with Dr. David Fraser. I'm already looking forward to next year's competition.

Q: If there's one thing you could say to high school students, what would it be?

A: If students are motivated to really make a difference in this country and around the world, the field of public health is a place where they can accomplish that.

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