

BMS 557 - Emerging Infectious Diseases Spring 2010

Time: 12:30-1:30 PM, Wednesdays

Location: DAI Auditorium A, 120 New Scotland Avenue

Course coordinator: Linda Styer, Ph.D. (Office: DAI 5001, Phone: 474-2163, e-mail: lms24@health.state.ny.us)

Learning Objectives

Students will learn the definition of an 'emerging infectious disease' and understand various factors that contribute to disease emergence. Basic principles of infectious disease epidemiology, including outbreak investigation and surveillance, will be discussed. Information about specific emerging infectious diseases will be presented, including basic biology, epidemiology, diagnostics, treatment/control and, if applicable, recent outbreaks within New York State. Students will gain an appreciation of the important role of public health scientists in monitoring, diagnosing and controlling emerging infectious diseases.

Date	Lecture #	Topic	Instructor	Email
Jan 20	1	Introduction	Styer	lms24@health.state.ny.us
Jan 27	2	Epidemiology and disease surveillance	Schaffzin	jks05@health.state.ny.us
Feb 3	3	SARS	Masters	masters@wadsworth.org
Feb 10	4	Influenza: a continually emerging pathogen	Wentworth	dew05@health.state.ny.us
Feb 17	5	HIV – the 'first' of many EIDs?	Styer	lms24@health.state.ny.us
Feb 24	6	Hepatitis C virus	Parker	mmp09@health.state.ny.us
Mar 3	7	Emerging mosquito-borne viruses	Styer	lms24@health.state.ny.us
Mar 10	8	Rabies and white-nose syndrome in bats	Rudd	rjr06@health.state.ny.us
Mar 17	9	Emerging fungal infections	Ramani	rxr15@health.state.ny.us
Mar 24	10	Food-borne pathogens	Musser	musser@wadsworth.org
<i>Mar 31</i>		<i>Spring Break</i>		
Apr 7	11	Zoonoses associated with rodents	Eidson	mxe04@health.state.ny.us
Apr 14	12	Emerging tick-borne infections	Backenson	bpb01@health.state.ny.us
Apr 21	13	TB: Re-emergence of an age-old killer	Escuyer	vee01@health.state.ny.us
Apr 28	14	Emerging parasitic diseases	Keithly	keithly@wadsworth.org

Reading Materials

Since there is no text book for the course, handouts and lecture contents will be the required reading materials. These materials will be available on the electronic reserves (ERes) page for the course. Password = EID

Exams

There will be two take home exams. Each lecture will contribute one 10 point essay question to the exams. Exam 1 (lectures 1-7) will be e-mailed to students on **March 5** and will be due by 12:30pm on **March 10**. Exam 2 (lectures 8-14) will be e-mailed to students on **April 30** and will be due by 12:30pm on **May 5**. Five points will be deducted for each day that an exam is late.

Attendance and class participation

Students can earn 2 points per lecture: 1 for attending lecture and 1 for participating in the lecture (asking a question, etc.)

Written summary of disease outbreak reported on ProMED-mail

The objectives of this assignment are (1) for students to become familiar with ProMED-mail, an internet based reporting system for infectious disease outbreaks and (2) to give students a chance to further explore an emerging infectious disease that is of interest to them. The written summary is due by 12:30pm on **April 21**. Two points will be deducted for each day that the summary is late. See back for additional details.

Grading

Take-home exams (10 pts/lecture)	140 pts (70%)
Attendance and class participation (2pts/lecture)	28 pts (14%)
Written summary of disease outbreak	<u>32 pts (16%)</u>
	200 pts

Written Summary of Disease Outbreak Reported on ProMED-mail

Objectives:

- Become familiar with ProMED-mail, an internet based system that reports disease outbreaks around the world
- Explore a current infectious disease outbreak that is of interest to you

Step 1: Sign up to receive ProMED-mail reports by email

- Go to the ProMED website, www.promedmail.org
- Click on **subscribe/unsubscribe** link
- Enter your email address and select **ProMED-digest (if you want posts condensed into 1-2 emails/day) or ProMED (if you want separate posts, i.e. many emails/day)**
- Click on **save and continue**
- A page will appear requesting contact information. The only required field is country (you may enter additional info if you wish). Click on **save contact information**
- A page will appear confirming that you wish to subscribe to ProMED. Click on **confirm change**.

Step 2: Select a particular infectious disease outbreak reported on ProMED-mail between 1/20/09 and 4/28/09. It can be an infectious disease outbreak in humans, animals or plants.

Step 3: Search for previous posts on ProMED-mail regarding this infectious disease. For widespread diseases, it may be helpful to limit the search to a particular country or region. Conduct other internet searches to gather information about this outbreak and background info on the disease (CDC, WHO, Emerging Health Threats Forum, Food Safety Network, OIE, etc.).

Step 4: Write a 2 page (12 pt font, double spaced) summary of the outbreak that includes the following items. Due by 12:30pm on Wednesday, April 21.

- Background information on disease
 - Type/classification of disease causing agent
 - Disease symptoms
 - Mode of transmission
 - Options for controlling or treating disease
- Description of outbreak
 - Who, what, where, when, how
 - Measures taken to control outbreak
 - Previous outbreaks of this disease reported on ProMED
- Potential contributors to outbreak
 - What factors are mentioned in the ProMED posts as potentially causing this epidemic?
 - Can you think of other contributing factors to this outbreak that are not mentioned in the posts?

Grading

Content	20 pts
<u>Grammar/Style</u>	<u>12 pts</u>
Total	32 pts