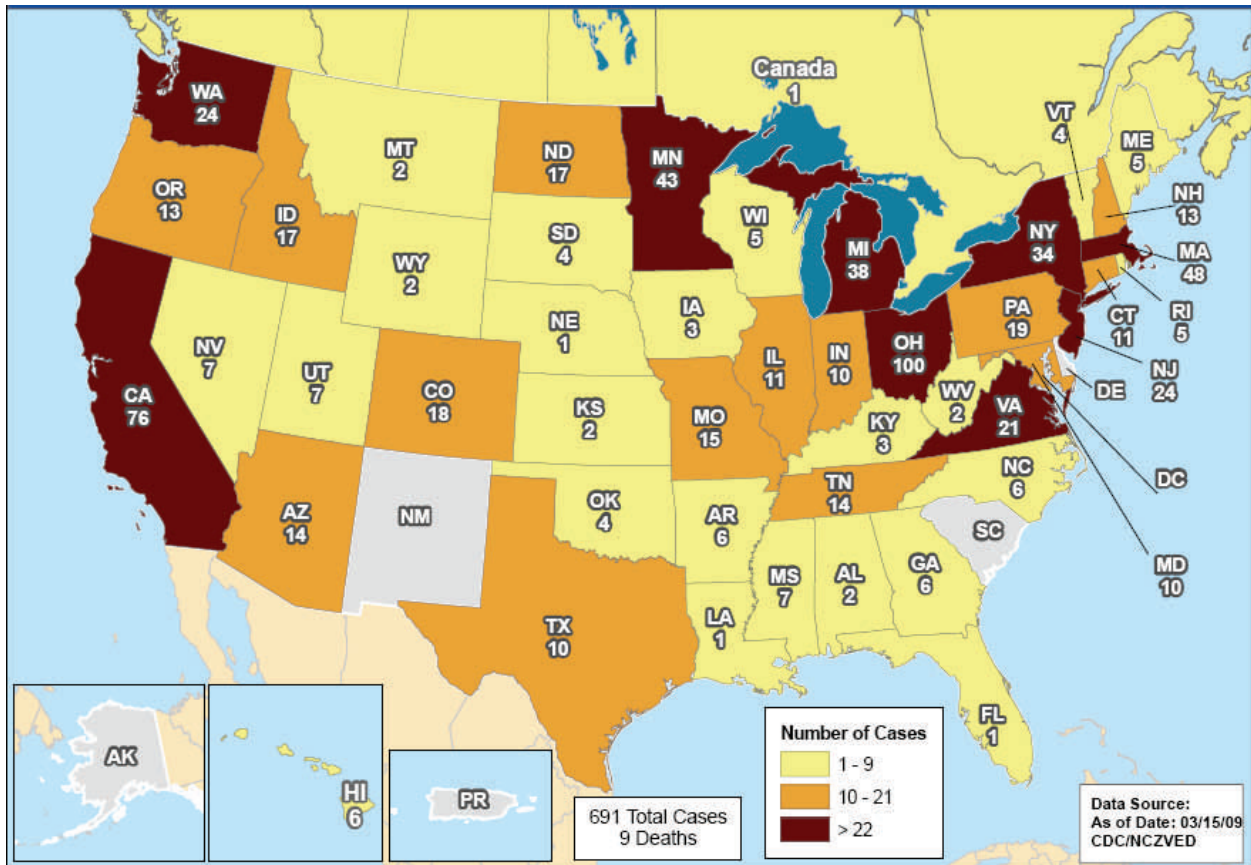




Salmonella!



Multistate outbreak of *Salmonella* Typhimurium, depicting number of cases per state as of March 15, 2009. Data source: Centers for Disease Control and Prevention, National Center for Zoonotic, Vectorborne, and Enteric Diseases.



U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



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In Memoriam

This publication of the *EIS Bulletin* is dedicated to the EIS alumni who have died within the past year.

F. Robert Fekety, MD (EIS '56)

Died January 6, 2009

John Leedom, MD (EIS '62)

Died June 26, 2008

Michael Gregg, MD (EIS '66)

Died July 9, 2008

Fredric Romm, MD, MPH (EIS '71)

Died January 14, 2009

Carl Armstrong, MD (EIS '78)

Died March 5, 2009

Ronald Davis, MD, MA (EIS '84)

Died Nov 6, 2008

Roger Gollub, MD (EIS '88)

Died November 19, 2008

This publication is electronically distributed bimonthly to current EIS officers and alumni by the Office of Workforce and Career Development (OWCD), Career Development Division (CDD), at CDC. Please send announcements to Douglas Hamilton (dhh0@cdc.gov or 404-498-6110).

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Director's Notes

If everything goes according to plan, this hardcopy edition of the *Bulletin* will be out in time for distribution at the EIS Conference. But then, things rarely go according to plan.

In the few months that have passed since the last edition of the *Bulletin*, things have been pretty quiet in the EIS Program office. Our primary focus has been getting the new class onboard and preparing for the conference. We are currently holding steady at 82 officers in the incoming class and are hopeful that the remaining PhD candidates will successfully complete their dissertations in time to join us in April.

In the last edition, I mentioned the growing crisis of contaminated peanut butter and the involvement of EISOs in a national case-control study over the New Year's holiday. Well, *Salmonella* persists in plaguing the food supply, and officers continue to devote countless hours to investigating the outbreaks. We will have several EIS posters and presentations describing this work in the regular program, and I will expect to see other *Salmonella* papers submitted as late-breakers.

EIS officers also demonstrated their flexibility and willingness to drop everything in response to another big emergency. In the last week of January, Kentucky was hit with a particularly severe ice storm that resulted in major damage to the local infrastructure. The state authorities requested assistance from the U.S. Department of Health and Human Services (HHS) to put teams into the field to conduct needs assessments among the affected population. The initial plan for HHS to field a response team ran into an unexpected snag (to this day, I don't know what the details are). Needing an immediate response, HHS turned to CDC, and CDC's Emergency Operation Center turned to EIS. In less than 3 hours, we

had mobilized 24 EISO volunteers, and eventually 20 officers went into the field where they assisted the field-based officer in Kentucky and an Epi-Aid team already working on the problem (see the "Notes from the Field" section of this *Bulletin* for a more detailed description of the activity.) The rapid and unselfish response of so many officers made me proud, yet again, to be associated with this fine group of public health professionals.

I hope that you all enjoy this year's conference and the opportunity to catch up with old friends and hear about the exciting work of EIS officers.

Doug Hamilton (EIS '91)

REMINDER: The *EIS Directory* is now available online to EIS alumni. If you have not received an e-mail from us, visit <https://www.cdc.gov/fms/eis/dir/> and register for access to the directory. After you have registered, we will send your log-in credentials and a temporary password so that you can log into the site.

After you log in, please take a few minutes to carefully review, verify, and update all of your information. We have migrated much of the historical directory data, but we believe some data were lost.

**In Memory of
Patricia A. McGee
January 22, 1963–February 5, 2009**

The CDC community was deeply saddened by the sudden death of Patricia "Pat" McGee on February 5, 2009. EIS alumni might remember Pat for her many years as the production editor of the *EIS Directory* and her long service in the *Morbidity and Mortality Weekly Report* publication office.

PulseNet Impact on *Salmonella* Investigations

By Kristen D. Folsom

In recent years, Epidemic Intelligence Service officers (EISOs) have been involved in a number of foodborne-illness investigations that have taken them to most of the 50 states, and even to other countries. Multistate foodborne outbreaks seem to have become more common, although they have actually only become more visible lately. This increased visibility can be attributed largely to the fact that one improved surveillance method, in particular, can identify clusters of illness that might have been missed in the past. This method — PulseNet — has armed EISOs with details of data that were not available before PulseNet's creation in 1996. Since then, this system has grown considerably in size, and as it has expanded, more potential outbreaks are detected each year. The ability of public health professionals to detect outbreaks has improved substantially, but this capability also means that more potential outbreaks to investigate exist for EISOs.

PulseNet is the network of public health laboratories across the country that perform subtyping analysis of microorganisms; it is possibly the most effective method of tracking genetic identities of bacterial strains. In laboratories, DNA subtyping, or *fingerprinting*, of bacteria is analyzed through pulsed-field gel electrophoresis (PFGE), then added to the PulseNet database, a collection of hundreds of different types of organisms with thousands of patterns. Through PulseNet, public health workers are identifying widely dispersed disease clusters better than they could in the past.

PulseNet's success is dependent on its many partners — laboratories at the U.S. Food and Drug Administration, U.S. Department of Agriculture, states' public health departments, and a limited number of local health departments. PulseNet laboratories are located strategically across the country, and they provide assistance to partnering laboratories within these agencies. Collaboration of these agencies strengthens nationwide surveillance of foodborne diseases and provides public health officials with the information needed to respond to outbreaks.

But maybe EISOs are the victims of the success of PulseNet in regards to improved surveillance. The PulseNet database now has more than

100,000 microorganism subtypes, and laboratories continue to deposit new findings. With so many contributors to the database, potential outbreaks have created a substantial workload for EISOs. Officers spend a great amount of time tracking down apparent clusters, and they must rule out a huge number of potential outbreaks before finding definitive answers. This time-consuming, labor-intensive process has made foodborne-outbreak Epi-Aids much different for EISOs than they were before PulseNet became available.

Certain clusters of infections are flagged by PulseNet, depending on their size, whether a particular strain is new, their rate of growth, whether a certain population group seems to be affected, whether associations with past history of known food sources exist, and other factors. Information concerning clusters is often sent to the OutbreakNet team, the CDC-led network of epidemiologists and other public health officials who investigate outbreaks of foodborne, waterborne, and other enteric illnesses. Headed by **Ian Williams, PhD, MS (EIS '94)** of the Enteric Diseases Epidemiology Branch (EDEB) of the National Center for Zoonotic, Vectorborne, and Enteric Diseases, this team has spent much of the last few years performing exhaustive detective work. The team currently comprises 11 EISOs within EDEB — **EIS 2008** officers, **Kashmira Date, MD, MPH; Elizabeth Cavallaro, MD, MPH; Achuyt Bhattarai, MD, MS; Karen Neil, MD, MPH; Minal Patel, MD;** and **EIS 2007** officers, **Rajal Mody, MD, MPH; Kavita Trivedi, MD; Elizabeth Russo, MD; Julie Harris, PhD, MPH; Melissa Viray, MD;** and **Amy Boore, PhD.**

In a December 2008 presentation entitled "Challenges of Investigating Multistate Foodborne Disease Outbreaks," Dr. Rajal Mody discussed many of the considerations that complicate foodborne outbreak investigations. Among the challenges were two related to PulseNet. First, because so many potential outbreaks are identified, public health officials must decide which should be investigated in-depth and where resources should be applied. Second, delays in reporting are inherent with PulseNet, and detecting clusters at the time of their occurrence is difficult.

The magnitude and scope of PulseNet's capabilities and the challenges endured by EISOs are exemplified in the recent investigation of *Salmonella* Typhimurium infections of 2008 and 2009. In November of 2008, PulseNet staff reported a widespread (across 12 states) occurrence of 13 Typhimurium isolates with an unusual PFGE pattern that had not been recorded previously in the database. Later in December 2008, a second cluster of Typhimurium isolates, which were remarkably similar to the PFGE patterns of the first cluster, was discovered through PulseNet. These two incidents were combined to represent a single outbreak strain, which resulted in a broad investigation to which the OutbreakNet team and state and local health departments responded.

So widespread was this particular investigation that CDC's Emergency Operations Center was activated, and many officers and alumni contributed to the investigation by participating in a multistate case-control study conducted from Atlanta. Tracking down the source of this unusual strain was especially difficult because it had originated from a food source that is not usually associated with *Salmonella* infection — peanut butter.

Dr. Elizabeth Cavallaro was the lead EISO involved in the Typhimurium investigations. Drs. Kashmiri Date, **Clara Kim (EIS '08)**, and Achyut Bhattarai were among the EISOs assigned to work on the study. Together, they coordinated with states' health departments to monitor the number of cases and to design an hypothesis-generating questionnaire to be used to interview patients with suspected illness. With so many cases being reported from so many different cities, devising a questionnaire in itself was a burdensome task. Fortunately, EISOs use information from FoodNet to assist in devising hypothesis-generating questionnaires. Foodnet is an active surveillance system for food-borne illness. Operators periodically conduct population surveys to determine which types of foods are being consumed. With that information, estimates can be derived on how commonly a wide variety of foods are consumed. The investigation is still ongoing, but cases have decreased substantially, thanks in part to the unyielding work of EIS in their response to PulseNet surveillance.

Another task for EISOs that resulted from observations of PulseNet was the difficult work of chasing down the source of a number of *Salmonella* Saintpaul outbreaks throughout the United States. In 2008, hundreds of persons in nearly all

states and the District of Columbia became ill with *Salmonella* Saintpaul. Information from PulseNet revealed that all infections had the same genetic fingerprint. The role of EIS was to assign officers to various states to assist in the investigations. This too became a multistate investigation that involved numerous federal, state, and local agencies, but unlike the investigations of peanut-product-related outbreaks, EISOs actually followed some of these clusters in their respective locales.

The field work involved in finding the sources of outbreaks is exemplified in a *USA Today* report dated July 2008, that highlights Dr. Elizabeth Russo's investigation in New Mexico. The article describes Russo's mission to answer why earlier cases of illness in New Mexico pointed to tomatoes and later cases implicated jalapeño peppers. Her work was intense and involved going door to door searching for persons who had become ill, interviewing them with questions about which foods they had eaten and when, and analyzing the collected data to understand why *Salmonella* Saintpaul illnesses were so persistent in New Mexico. Russo reveals that these field investigations were particularly challenging for many different reasons. "Committing to a specific direction is challenging because the more questions you get answers to, the more you have; balancing the expectations of the public and the federal government is challenging; and the work is physically challenging because of the number of hours spent trying to be productive," she says. Imagining this scenario for each cluster investigation for each major report from PulseNet puts into perspective the charge that EISOs have.



Dr. Elizabeth Russo (EIS '07) shows a pepper to a potential patient to determine whether jalapeños or Serranos had been eaten.

Other EISOs and alumni also worked in the field to uncover the mystery of the food source of *Salmonella* Saintpaul illnesses and performed the same type of work that Russo did in New Mexico. Dr. Amy Boore worked in New Mexico, assisting the Indian Health Service and the New Mexico Department of Health. Dr. Melissa Viray visited Abilene, Texas, to assist with investigations there, and then traveled to Houston, along with **Robin Toblin (EIS '07)**, to assist the Texas Department of State Health Services, the Harris County Department of Public Health and Environmental Services, and the Houston Department of Health and Human Services with illnesses connected to a potential common exposure to a restaurant chain in and around Houston. Dr. Julie Harris and **Deborah Dee (EIS '07)** were dispatched to Charlotte, North Carolina, to assist the North Carolina Department of Health and Human Services in their investigation of infections apparently resulting from a common exposure to a restaurant. Drs.



Dr. Sohyun Park (EIS '07) (fourth from left) poses with healthcare workers from CDC and the Missouri Department of Health.

Karen Neil, **Sohyun Park (EIS '07)**, and **Ryan Fagan, MD, MPH (EIS '06)** visited Missouri to assist the Missouri Department of Health and Senior Services in their investigation of a cluster of infections among persons who had eaten at the same restaurant in Jefferson County, Missouri. Dr. Kavita Trivedi assisted in New York in August 2008 with investigations there, and **Adrienne Sever, MD (EIS '07)**, **Hemanth Nair (EIS '07)**, and Dr. Rajal Mody visited Wichita Falls, Texas, to assist in that state's investigation. Says Mody, "as PulseNet has grown, more and more potential outbreaks are detected each year. Our ability to detect



Dr. Adrienne Sever (EIS '07), selects a lunch choice from the menu of a restaurant implicated in a *Salmonella* outbreak, Wichita Falls, Texas.

outbreaks has really improved, but it does mean that there are a lot more potential outbreaks to investigate."

A review of Epi-Aids that relate to foodborne outbreaks (in addition to the most recent Typhimurium and Saintpaul ones) during the past 3 years provides an indication of the scope of investigations in which EISOs are involved. For example, **Casey Barton-Behravesh, DrPh, DVM, MS (EIS '06)** investigated a multistate outbreak of *Salmonella* Typhimurium infections in November 2006 and *Salmonella* Schwarzengrund infections in Pennsylvania, in August 2007. **Christine Olson, MD, MPH (EIS '06)** and **Nicholas Gaffga, MD, MPH (EIS '05)** investigated *Salmonella* Oranienberg infections associated with a banquet facility in Arizona, in January 2007. Nicholas Gaffga also investigated a *Salmonella* outbreak in Arkansas linked to a sushi restaurant in February 2006. **Anandi Sheth, MD (EIS '06)**, along with Dr. Rajal Mody, investigated *Salmonella* Typhimurium outbreaks in Nevada in September 2007.

In March 2008, Julie Harris, Melissa Viray, and **Ciara O'Reilly, PhD (EIS '04)** went to Colorado to assist the Colorado Department of Public Health and Environment with their investigation of *Salmonella* Typhimurium cases that had been reported in Alamosa, Colorado. The suspected culprit was Alamosa's municipal water system, which had distributed nonchlorinated groundwater from deep wells. Dr. Minal Patel, along with Dr. Elizabeth Russo, assisted the Arizona Department of Health Services and the Maricopa County

(continued on page 9)

Recent Publications by Current Officers

- Katz K, Toblin R.** Language matters: unintentional strangulation, strangulation activity, and the “choking game.” *Arch Pediatr Adolesc Med* 2009;163:93–4.
- Wu HM, Harcourt BH, Hatcher CP, Wei SC, et al.** Emergence of ciprofloxacin-resistant *Neisseria meningitidis* in North America. *N Engl J Med* 2009;360:886–92.
- Carlson SA, Fulton JE, Galuska DA, Kruger J, **Lobelo F, Loustalot FV.** Prevalence of self-reported physically active adults—United States, 2007. *JAMA* 2009;301:926–7.
- CDC. Prevalence of self-reported physically active adults—United States, 2007. *MMWR* 2008;57:1297–300. (Submitted by **Fleetwood Loustalot.**)
- CDC. *Clostridium perfringens* infections among inmates at a county jail—Wisconsin, August 2008. *MMWR* 2009;58:138–41. (Submitted by **Carrie Nielsen.**)
- Franco M, Diez-Roux AV, Nettleton JA, Lazo M, Brancati F, Caballero B, Glass T, **Moore LV.** Availability of healthy foods and dietary patterns: the multi-ethnic study of atherosclerosis. *Am J Clin Nutr* 2009;89:897–904.
- CDC. Children with elevated blood lead levels attributed to home renovation and remodeling activities—New York, 2006–2007. *MMWR* 2009;58:55–8. (Submitted by **Latetia Moore.**)
- Dharan NJ, Gubareva LV, Meyer JJ, et al.** Infections with oseltamivir-resistant influenza A (H1N1) virus in the United States. *JAMA* 2009;301:1034–41.
- CDC. Breastfeeding-related maternity practices at hospitals and birth centers—United States, 2007. *MMWR* 2008;57:621–5. (Submitted by **Deborah Dee.**)
- Dee DL, Sharma AJ, Cogswell ME, et al.** Sources of supplemental iron among breastfed infants during the first year of life. *Pediatrics* 2008;122:S98–104.
- Borse NN, Gilchrist J, Dellinger AM, et al.** Unintentional childhood injuries in the United States: key findings from the CDC childhood injury report. *J Safety Res* 2009;40:71–4.
- Bhalla K, Harrison J, Abraham J, **Borse NN, Lyons R, Boufous S, Aharonson-Daniel L.** Global burden of disease injury expert group. Data sources for improving estimates of the global burden of injuries: call for contributors. *PLoS Med* 2009;6:e1.
- MacNeil A, Reynolds M, Braden Z, et al.** Transmission of atypical varicella-zoster virus infections involving palm and sole manifestations in an area with monkeypox endemicity. *Clin Infect Dis* 2009;48:e6-8.
- MacNeil A, Reynolds M, Damon I.** Risks associated with vaccinia virus in the laboratory. *Virology* 2009;385:1–4.
- MacNeil A, Reynolds M, Carroll D, et al.** Monkeypox or varicella? Lessons from a rash outbreak investigation in the Republic of the Congo. *Am J Trop Med Hyg* 2009;80:503–7.

Epi-Aids

The following Epi-Aids have been issued since January 1, 2009:

Number	Title	Location	Officer
2009-017	Multistate outbreak of <i>Salmonella</i> Typhimurium infections	OH	Clara Kim
2009-018	Multistate outbreak of <i>Salmonella</i> Typhimurium infections	Multistate	Elizabeth Cavallaro
2009-019	Respiratory health effects from a coal ash spill	TN	Shahed Iqbal, Isabela Ribeiro
2009-020	Investigation of a cluster of granulomatous mastitis	IN	Elissa Meites Vanessa Jarquin
2009-021	Violence by children and adolescents in Kenya and Tanzania	Kenya and Tanzania	Kevin Vagi Matt Gladden
2009-022	Acute gastroenteritis among passengers on cruise ship	Costa Rica	Christopher Howard Jennifer Cortes
2009-023	Varicella in a facility for developmentally disabled adults	CT	Latetia Moore
2009-024	Outbreak of cryptococcosis	NC	Kendra Stauffer
2009-025	Human swine influenza	SD	Fatimah Dawood Dianna Blau
2009-026	Investigation of an outbreak of acute renal failure	Nigeria	Michael Nguyen
2009-027	Increased incidence of <i>Haemophilus influenzae</i> type B	MN	Sara Lowther Michael Jackson Cynthia Thomas
2009-028	Shelter surveillance, community assessment in Kentucky	KY	Yanique Redwood Sara Vagi Shahed Iqbal
2009-029	School-based cluster of suspected pertussis cases	GA	Surbhi Modi
2009-030	<i>Streptococcus pneumoniae</i> meningitis	MO	Jennifer Rosen Fatimah Dawood
2009-031	Cholera outbreak among refugees in Dadaab refugee camp	Kenya	Christine Mitchell
2009-032	Outbreak of typhoid fever, Kasese District, Uganda	Uganda	Karen Neil
2009-033	Assessment of unusual number of cancer cases in Maryland	MD	Brunella Frammartino
2009-034	Possible donor-derived zygomucosis	Multistate	Alicia Siston
2009-035	MDR-TB and XDR-TB disease outbreak	Namibia	Philip Ricks Surbhi Modi
2009-036	Carbon monoxide (CO) detectors and CO detector laws	NC	Shahed Iqbal Christine Mattson
2009-037	Acute hepatitis H virus associated with injections at spa	NC	Adrienne Sever
2009-038	Outbreak of <i>Salmonella</i> Anatum infections	AZ	Amy Boore, Sanny Chen
2009-039	Outbreak of <i>Salmonella</i> Oranienburg infections	MN	Achuyt Bhattarai
2009-040	Methicillin resistant <i>Staphylococcus aureus</i> (MRSA) in postpartum women and newborns	MA	Matt Wise Molly Lamb

Other Investigations Recently Conducted by EISOs

Officer	Investigation	Location	Dates
Ghasi Phillips	Prevalence of periodontitis among pregnant and nonpregnant women across sociodemographic levels	National data	10/08–12/08
Matt Wise	Risk factors for surgical-site infection after knee and hip prosthetic procedures, United States	US	10/08–Present
Ghasi Phillips	Tuberculosis contact investigation regarding a medical transport driver	DC, MD, VA	11/08–12/08
Matt Wise	Investigation of acute hepatitis B virus infections in a psychiatric skilled nursing facility	CA	12/08
Rakhee Palekar Cindy Thomas	Collaborating with the Baltimore Regional Perinatal Advisory Group on a pertussis awareness and immunization initiative	Baltimore, MD	1/09–Present
Matt Wise	Qualitative assessment of the impact of MRSA screening and reporting legislation	IL	1/09–Present

PulseNet Impact on *Salmonella* Investigations (continued from page 6)

Department of Public Health in an investigation of *Salmonella* Montevideo infections. And Drs. Kashmiri Date and Rajal Mody assisted Montana's Department of Public Health and Human Services in investigating *Salmonella* Poona infections. The level of involvement of EIS in recent foodborne outbreaks is a tell-tale indication of the increased surveillance that PulseNet provides.

Investigating and controlling foodborne infections is a critical component of protecting the public's health. So although PulseNet has its disadvantages, and EISOs are probably best-prepared to describe what those are, few will deny that its establishment is a welcome gift to disease surveillance. In addition to *Salmonella* outbreaks, the system has also detected clusters of infections caused by *Listeria monocytogenes*, *Shigella*, *Escherichia coli*, *Campylobacter*, and *Vibrio cholerae*. More than 100 are detected each year, the majority of which probably would have been missed without PulseNet's help. Absent this revolutionary operation, the public might be more at risk for contracting foodborne illnesses. The system prevents an

untold number of illnesses each year. For example, an outbreak of *E. coli* illness in 1993 sickened hundreds of persons; had PulseNet been in use at that time, the majority of those illnesses might have been prevented. Says Dr. Ian Williams, "PulseNet helped with early detection of the recent *Salmonella* Typhimurium outbreak in that epidemiologists were able to find the source faster. It also helped track and identify where the cases were occurring, which helped guide the investigation."

What about PulseNet's outlook and its relation to EISOs and Epi-Aids? Yes, the PFGE method and analysis is time-consuming; yes, it does require a substantial level of skill; and yes, pattern results can vary from person to person. But the value that PulseNet brings to foodborne outbreaks outweighs its shortcomings. Subtyping distinguishes outbreak cases from coincidental sporadic cases, and it reduces misclassification of subtypes. PulseNet also easily links sporadic cases that otherwise might be too widely dispersed to detect. And sensitivity of subtyping has greatly increased through PulseNet's fingerprinting methods. For EISOs, the work of tracking down sources of foodborne outbreaks must continue, if only with optimism that PulseNet will improve with regard to achieving real-time subtyping and communication. •

Recent Presentations by Current Officers at National or International Meetings

Officer	Presentation	Meeting	Date
Nila Dharan	Oseltamivir-resistant influenza A (H1N1) in the United States, 2007–2008	Infectious Disease Society of America (IDSA) Annual Meeting. Washington, DC	10/26/2008
Jennifer Rosen	Geographic variation in invasive pneumococcal disease	IDSA Annual Meeting. Washington, DC	10/28/2008
Nila Dharan, Mef Galle	Outbreak of oseltamivir-resistant influenza A in a long-term care facility, Illinois (poster)	IDSA Annual Meeting. Washington, DC	10/28/2008
Deborah Dee	Breastfeeding-related maternity practices at U.S. hospitals and birth centers: Results of the 2007 Maternity Care Practices in Infant Nutrition and Care (mPINC) Survey	Fourteenth Annual Maternal and Child Epidemiology Conference, Atlanta, Georgia	1/12/2008
Deborah Dee	(Two presentations) Characteristics of U.S. breastfeeding practices; and The 2007 U.S. maternity care practices study	2009 International Conference on the Theory and Practice of Human Lactation Research and Breastfeeding Management Orlando, FL	1/15/2009
Nagesh Borse	Protect the ones you love: the burden of child injuries	Assoc. of Maternal and Child Health Programs — Annual Conference 2009 Washington, DC	2/21–25/2009
Molly Lamb	Patterns of obesity among women of childbearing age	National Birth Defects Prevention Network. Nashville, Tennessee	2/23/2009
Fleetwood Loustalot	Self-reported prevalence of aerobic physical activity among U.S. states and territories	26th Annual Conference: Behavioral Risk Factor Surveillance System. Atlanta, Georgia	3/17/2009
Matt Wise	Outbreak of multidrug-resistant <i>Acinetobacter baumannii</i> in a burn unit	Society for Healthcare Epidemiology of America (SHEA), 2009 Annual Scientific Meeting, San Diego, CA	3/19–22/2009
Elissa Meites	A pseudo-outbreak of bacillus in blood cultures—United States, 2008	SHEA, 2009 Annual Scientific Meeting, San Diego, CA	3/19–22/2009
Jennifer Rosen	Barriers to intravenous penicillin use for treatment of nonmeningitis pneumococcal disease: results of an Emerging Infections Network Survey	SHEA, 2009 Annual Scientific Meeting, San Diego, CA	3/19–22/2009
Deborah Dee	Breastfeeding-related maternity practices at birth centers and hospitals in the US: results of the first national CDC mPINC Survey, 2007	Fourth Breastfeeding and Feminism Symposium: From Birthplace to Workplace. Greensboro, NC	3/26/2009
Latetia Moore	Public support for street-scale urban design policies to promote physical activity	American College of Sports Medicine 56th Annual Meeting, Seattle, Washington	5/27–30/2009
Latetia Moore	Fast food availability, consumption, and diet quality: the multiethnic study of atherosclerosis	41 st Annual Society for Epidemiologic Research Meeting. Chicago, Illinois	6/24–27/2009

Notes from the Field

Community Assessment and Response Following the Kentucky Ice Storms, 2009

Submitted by *Deborah Dee (EIS '07)*, *Sara Vagi (EIS '08)*, and *Emily Lutterloh (EIS '08)*

“Read and respond right now! Immediate deployment likely.” These were the words received by the 2007 and 2008 EISOs in an e-mail from Doug Hamilton at 1:03 p.m. on Tuesday, February 3, 2009. For an EISO in the National Center for Chronic Disease Prevention and Health Promotion like me (Deb), this was music to my ears. Sure, I’d had the opportunity, along with almost every other EISO in my class, to be part of the *Salmonella* Saint-paul investigation, but this was disaster-related, urgent, and looked like something requiring hands-on public health action. Maybe not on the order of Hurricane Katrina, but it sounded like an opportunity to use some of the public health and disaster response skills we learned during our EIS training and through Commissioned Corps modules. I didn’t spend much time pondering, but instead, immediately sent a reply to Doug to express interest, and then frantically began searching for any of my four (yes, four) supervisors to obtain the required official supervisor approval so that I could be added to the deployment roster. Each of my supervisors sent enthusiastic and supportive approvals, and I was added to the list.

From my perspective, I (Emily) remember how happy I was to see the first CDC team walk into our Disaster Operations Center (DOC). As the Kentucky EISO, I had been working on the ice storm response for several days, helping with shelter surveillance and trying to get a handle on the carbon monoxide poisoning problem while we still had very little information about what was happening in western Kentucky.

I (Sara), too, was very happy to meet up with the deployed EISOs. I had deployed a day earlier to the DOC in Frankfort to meet with the Kentucky Department for Public Health (KYDPH) for planning, then met up with the rest of the CDC team in Bowling Green. After a few days of working to coordinate with state officials, the Incident Response

Coordination Team, the CDC Emergency Operations Center, and Health Studies Branch at the National Center for Environmental Health, it was nice to finally meet up with the group of EISOs who were ready and willing to help in any way they could.

Although we are interjecting humor into the description of our experiences, the situation that led to this Epi-Aid was serious. Kentucky was declared a major disaster area after a severe ice storm struck on January 27, 2009, causing at least 34 deaths and leaving 770,000 residents without electrical power. Communications were also difficult, with both



Roadside storm damage in Kentucky

landlines and cell phones out of service in the most severely affected western part of the state.

On February 2, 2009, KYDPH requested assistance in rapidly assessing the health and safety of people residing in rural and remote counties in western Kentucky. In response, a CDC team was deployed to conduct a Community Assessment for Public Health Emergency Response (CASPER).

Initial plans were sketchy, but evolved over time as more information became available. Plan A? Atlanta-based EISOs would fly to Nashville, where we would rent four-wheel

drive (4WD) vehicles (to best navigate the expected icy, dangerous roads during our community assessment) to take to the Epi-Aid base in Bowling Green. The problem? Insufficient quantities of 4WDs in Nashville because so many had been rented by those affected by and responding to the storms. So, on to Plan B. Each deployed EISO would rent a 4WD from Rental Car Agency X in Atlanta and drive to Bowling Green. But another problem arose — upon arrival at Rental Car Agency X, said agency realized they had underestimated the number of 4WDs available for rental and would not be able to meet our needs. Finally, Plan C worked out for us. We obtained 4WDs from Rental Car Agency Y. Problems solved! The state-based EISOs who were deployed flew into Nashville and were able to obtain 4WDs (one of which was a Hummer!), which they drove up to Bowling Green.

Our deployment was unique in several ways, and included activation of an Incident Response Coordination Team. The mission included collaboration among the state of Kentucky, CDC (EISOs plus Public Health Prevention Service fellows), the U.S. Department of Health and Human Services, and the Federal Emergency Management Agency. For the most part, I think we would describe the collaboration as successful, although, like any multi-agency activity, not without some communication challenges. Nevertheless, we worked together to ultimately collect, enter, and analyze data from 735 face-to-face interviews with affected citizens in 10 counties that covered 3,900 square miles of western Kentucky.

What was it like driving through storm-ravaged, sometimes remote areas of western Kentucky? Although it had been almost two weeks since the storm, we encountered many areas with downed power lines and poles strewn across roads, massive trees wrecked or downed from the weight of so much ice, and an occasional pet that had been left behind and had succumbed to the cold weather. Many of us met persons who were using kerosene heat-

ers inside their homes without proper ventilation or using generators inside or too close to their homes, putting themselves and their families at risk for carbon monoxide poisoning or death. In addition to providing informational flyers, we took immediate, simple steps in response, such as opening windows and moving generators to safe locations. The people we met were grateful for our help in keeping them safe and made efforts to express their thanks to us. Some of our findings — up to 25% of households were still without electricity two weeks after the storm, and up to 56% used generators. In some areas, 20% claimed that pet ownership prevented them from seeking alternative shelter. Among the 10% who reported special needs, 44%–67% were oxygen-dependent. In response, KYDPH distributed information about safe generator use, and KYDPH's planning for future disaster response includes pet-friendly shelters and ways to better address special needs of oxygen-dependent persons.



Deborah Dee (EIS '07) sorts door hangers that contain information for safe generator and kerosene heater use, Kentucky



Kentucky Deployment Group

We bonded over the long hours and numerous musters, as is the case with most Epi-Aids, and we shared in the following anecdotes along the way: Kentuckians are among the most friendly and generous people you'll ever meet, even when strangers walk up to them to ask a bunch of questions while their power is out and they're trying to clean up the debris in their yards. It is wise not to drive a huge SUV up a steep, narrow driveway lest you risk damaging the vehicle when you try to turn around. Bowling Green is home to a country-hip-hop bar that has a mechanical bull. Responding to a request for public health assistance is rewarding. Maybe we'll be ineligible for the Field Medical Readiness Badge and the Crisis Response Service Award (ask anyone who participated for details), but we'd still volunteer again in a heartbeat. •

Alumni Publications

Doshi S, Khetsuriani N, Zakhashvili K, Baidoshvili L, Imnadze P, Uzicanin A. Ongoing measles and rubella transmission in Georgia, 2004–05: implications for the national and regional elimination efforts. *Int J Epidemiol* 2009;38:182–91. Epub 2008 Dec 15.

Hyde TB, Nandy R, Hickman C, J Langidrik JR, Strebel PM, Papania MJ, Seward JF, Bellini WJ. Laboratory confirmation of measles in elimination settings: experience from the Republic of the Marshall Islands, 2003. *Bull World Health Organ* 2009;87:93–8

Notes from the Field (cont.)

Washing Your Hands: Measuring Factors Associated with Respiratory Disease Prevention through Technology

Submitted by *Ben Silk (EIS '08)*

Evidence that hand washing with soap can reduce respiratory disease incidence overall exists, but its role for prevention of clinically confirmed disease is uncertain in such resource-poor countries as Bangladesh. **Ben Silk (EIS '08)**, **Adam Cohen (EIS '05)**, **Stephanie Schrag (EIS '98)**, and Tom Taylor of the Respiratory Diseases Branch and **Saumil Doshi (EIS '08)** and **Alicia Fry (EIS '99)** of the Influenza Division have partnered with the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) and the University of Buffalo's School of Public Health and Health Professions on a case-control study to measure associations between hand washing with soap and influenza and radiologically confirmed pneumonia among young children living in an urban area of the capital city, Dhaka.

The study relies on a community-based surveillance system that tracks influenza and pneumonia among a defined population and provides medical care for persons who participate in surveillance. Hand washing behavior of case and control households will be measured

by using several strategies designed to record hand washing events and other pertinent data. Field research assistants will begin household visits by administering a questionnaire about demographics and illness histories, knowledge of acute respiratory infections, hand washing knowledge, and socioeconomic status.

Next, the research assistants will conduct a series of observations in the home, recording water availability, sanitation facilities, and hand washing behaviors. Use of technology is also an important part of the study. Soap use events will be detected by using bars of



soap with a motion sensor (accelerometer) and data-logging device embedded. The soaps are designed to closely resemble actual soaps that are available locally. Can you tell which of these bars is the soap with the motion sensor? (The soap with a motion sensor is in her left hand.)

Alumni Notes

Significant events submitted
by alumni

In a January 22, 2009, memo, **Richard Besser (EIS '91)** was appointed as the Acting Director of CDC/ATSDR. In the same memo, **Steven Galson (EIS '86)**, Acting Surgeon General, was appointed as the Acting Assistant Secretary for Health.



What's Happening?

Births, marriages, and other significant events in the lives of current officers

Matt Richey (EIS '08) and his wife, Tati, had a daughter, Anabelle Grace, on February 25, 2009. She weighed 8 lbs, 4 oz and was 20.5 inches long.

Liam Chang, the son of Samuel and **Loretta Chang (EIS '08)**, was born on February 17, 2009.



Tracie Gardner (EIS '08) and **Elissa Meites (EIS '08)** visit Liam and mother, **Loretta (EIS '08)**



Christian Banke (left), son of **Kathy Kohler Banke (EIS '99)**

Kathy Kohler Banke (EIS '99) and her husband, Tue Banke, have been joined in their San Diego home by Christian Kai Banke. Christian was born on July 28, 2008, and weighed in at 7 lbs.

Alumni Notes (cont.)

Significant events submitted by alumni



Gabriel and **Kevin Cain (EIS'04)**

Kevin Cain (EIS '04) writes “Joan and I are delighted to announce the birth of our son, Gabriel Patrick Cain, at 4:26 a.m. on February 7, 2009. He weighs 6 lbs 8 oz, and he is 19 inches long.”

Julie Gilchrist (EIS '97) reports that “Jordan Taylor Klevansky made her arrival at 4:41 a.m. on Sunday, February 8, 2009. She was 6 lbs 12 oz and was 19 in long.”



Jordan Taylor Klevansky

Job Notices

Sanofi Pasteur's Clinical Development and Medical Affairs teams are hiring directors to their respective groups. For these or other positions where EIS certification adds value, please contact Kristen Dorn at 610 768-7778 or kdorn@spges.com for more information. Visit us at <http://www.sanofipasteur.com>.

University of Kentucky invites applications from qualified candidates for a tenure-track faculty position at the associate professor or full professor level. The individual selected must have a PhD, DrPH, or ScD in epidemiology, or an MD with an MPH from an accredited school of public health, or equivalent training. Applications, including curriculum vitae, one copy of at least three recent or representative publications, and contact information for three references should be sent to Thomas C. Tucker, PhD, MPH, University of Kentucky, College of Public Health, Department of Epidemiology, 121 Washington Avenue, Lexington KY 40536-0003.

Texas Department of State Health Services, Disease Prevention Intervention Service, is seeking an infectious diseases medical officer. Candidate must have experience in the treatment, prevention, and control of infectious diseases; the practice of public health; conducting epidemiologic investigations; Incident Command Structure and National Incident Management Systems; and planning and managing change. For more information, contact the HR Service Center at 888-894-4747.

San Francisco Dept of Public Health and Association of Bay Area Health Officials (ABAHO) is seeking a medical or nurse epidemiologist to work part-time to facilitate, coordinate, and support the established regional ABAHO Pandemic Influenza Work Group. This position will review, research, and assess existing evidence and guidance regarding pandemic influenza from a local public health perspective and will guide development of regional pandemic influenza response policies and plans. For questions, contact Erica Pan, Director, Bioterrorism and Infectious Disease Emergencies Unit, SFDPH (erica.pan@sfdph.org or 415-554-2652).

New York State Department of Health, Office of Health Insurance Programs is seeking a Public Health Physician II to serve as medical director for the Division of Financial Planning and Policy in the Department of Health's Office of Health Insurance Programs. Send résumés by e-mail, with subject line 88518/PHP2/cjs, to resume@health.state.ny.us, or mail to Human Resources Management Group, 88518/PHP2/cjs, Room 2276, Corning Tower Building, Empire State Plaza, Albany, NY 12237-0012, or fax with subject line 88518/PHP2/cjs.

New York City Department of Health and Mental Hygiene (DOHMH) is seeking a data analyst. Qualified candidates will possess a PhD or master's degree in statistics, biostatistics, epidemiology, or in a closely related field and 1–3 years of full-time experience in an appropriate field of specialization. Expertise in the use of SAS[®] software is strongly preferred. New York City residency is required within 90 days of appointment. For questions, please contact Trang Nguyen at tnguyen@health.nyc.gov. Apply online at <http://www.healthsolutions.org> (search for NYC Dept. of Health — Data Analyst–0029).

DOHMH, Bureau of Emergency Management (BEM), is seeking an MD to serve as medical director. The ideal candidate will hold a valid New York medical license and be board-eligible in his or her respective medical field (ideally general preventive medicine, public health, or a closely related field); have clinical experience, project management experience, and knowledge or experience in emergency preparedness, public health, or disaster medicine; and have excellent communication (verbal and written), interpersonal, and collaborative leadership skills. For questions, contact Marina Thompson, BEM Personnel Coordinator at mthomps@health.nyc.gov or 212-676-2980. To read the complete job description, visit <http://www.nychealthcareers.com> and search for JVN # 816-09-0005BT.

DOHMH BEM is also seeking a nurse practitioner to join their senior medical staff as clinical director to manage public health emergency planning and response functions. See previous listing for contact information.

Food and Drug Administration, Center for Food Safety and Applied Nutrition, has openings for the following four positions: 2 epidemiologists, 1 medical officer, and 1 veterinarian medical officer. All positions are based in College Park, MD. Flexible work schedules are available. Deadline to apply is April 30, 2009. To request an application, send an e-mail to ofdcer@fda.hhs.gov.

CDC's Maternal and Child Health Epidemiology Program is seeking doctoral-level, senior epidemiologists and health scientists to assign to state public health agencies. Applicants must have an MD/MPH, PhD, or DrPH and strong experience or training in maternal child health epidemiology and quantitative analysis. Contact Wanda Barfield, MD, MPH, CAPT, USPHS directly by phone (770-488-6231) or e-mail (wbarfield@cdc.gov) to apply for an assignment.