APHL: An Unlikely Media Darling Brings A Serious Message To America

After the discovery of Bacillus anthracis in the US postal system, a spate of anthrax cases along the East Coast, and sporadic reports of possible new terror attacks, public interest in microorganisms has skyrocketed, and with it an interest in the unique expertise of APHL members. Indeed, since anthrax and bioterrorism have become staples of the daily news, APHL and laboratories across the continent have found themselves at the eye of a virtual media storm.

“Suddenly, we became the story,” said APHL Executive Director Scott Becker. In a telephone interview, Becker reported fielding just two press calls in all of last year. Since September 11, however, he has been answering between two and six calls daily, with as many as 20 press calls in one particularly busy day. My oddest morning,” said Becker, “was one in which I talked to the BBC in London and Glamour Magazine all within an hour.” APHL President Mary Gilchrist has been similarly busy, consulting with ABC News, and appearing on 60 Minutes, CNN, and Greta Van Sustern’s The Point.

“No now that we’ve been discovered,” said Becker, “the challenge is to keep it up” and to use the unprecedented exposure to promote the interests of public health laboratories. Becker said the association has struggled to achieve a “delicate balance” in its communications—on the one hand, crafting a message that portrays the real needs of public health laboratories; on the other, not “scaring the bejesus out of the general public” by implying that labs are wholly ill-prepared for an emergency.

With the help of Jill Merrick, president of Merrick Communications, APHL has formulated five key media messages:

1) Public health laboratories are on the front line in the fight against bioterrorism.
2) Now more than ever, investment in public health is the best civil defense against bioterrorism.
3) The public deserves the right answers. That means lab work must be done right, tests must be complete and corroborated, and test results must be communicated clearly to facilitate decision-making.
4) With resources in place, public health laboratories can significantly minimize the impact of a biological terror attack; Accurate information reduces fear and puts the country on alert.

5) APHL is working to strengthen the nation’s public health laboratories.

Merrick, who has been working with the association since late October, said the media deluge can help APHL achieve multiple goals. First, it presents “an opportunity to talk about APHL’s vision in setting up a response network to handle exactly this kind of (anthrax) crisis,” she said, referring to the Laboratory Response Network. Second, it can “help the association into a gear where it communicates regularly with all the audiences it needs to: Congress, CDC, and the public.”

APHL’s communications strategy is two-pronged. Designated association spokespersons have received formal media training and are responding to as many queries as possible, thereby getting accurate information out and building relationships with the press.

At the same time, APHL is targeting its efforts to get factual information to those who need to make immediate policy decisions. Gilchrist testified before the Senate Appropriations subcommittee on health, which is debating a bill that would provide $4 billion to fund bioterrorism preparedness measures. Merrick has been calling media outlets in politically important districts to “draw attention to (public health laboratories) in the hometowns of senators who are working on funding for CDC and state lab networks.” Favorable hometown coverage, she said, encourages congressional leaders to “think positively about the services labs are providing.”

Locally, Skeels said, “There is a lot of interest in coming to our lab and seeing what we do.” (He noted that reporters are almost always impressed by lab work; “Some of them get almost gaga.” One journalist spent 20 hours in Skeels’ lab doing background research.) This interest has netted the lab two feature articles in The Oregonian and one in The Portland Tribune. Overall, he observed, the media spotlight has been “immensely helpful” and holds “tremendous potential for us to be finally recognized for what we do,” boosting, for example, a nascent campaign to construct a new lab building and drawing the attention of elected officials.

Yet, despite the fact that there is “way, way more benefit than risk” in talking to the press, Skeels cautioned fellow laboratorians to “not give away any more details than you would like to see in print.” He cited one incident in which a local paper reported—correctly—that his lab has anthrax cultures on-site. Reporters have also asked for...
specific sample results, he said, advising colleagues, “do not be lulled into that trap.” It’s best to “control who (on staff) can even talk to the press.”

**What Next?**

As the media frenzy abates, Merrick noted that APHL will need to keep in touch with science editors and other reporters. “It takes years to build up the relationships that we have already with the print and broadcast media as a result of this crisis,” she said. “It will be up to us to . . . keep these relationships going, to bring news to them, to draw their attention to local hooks.”

APHL is well-positioned to pursue ambitious communications goals. Becker said the association had been planning to spend a year researching and developing a communications plan. Instead, it happened “overnight.” The association has hired a clipping service to monitor lab-related news reports. It is working with Merrick Communications and Intern Blair Farr to support new communications activities. It has a board of directors lately trained in media relations. And it is making plans for new kinds of coverage; for example, pitching the story of APHL to the *Journal of Association Management*.

Becker said he is grateful to APHL members for promoting public health laboratories throughout the tense and chaotic months after September 11. “We’ve always been an invisible part of the public health infrastructure,” he said. No more.

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**Nation Running Short of Qualified Public Health Lab Directors**

*“Today the need for leaders is too great to leave their emergence to chance.”*

*Institute of Medicine, 1988*

In a soon-to-be-released study, APHL reports that the Unites States faces an imminent shortage of qualified public health laboratory (PHL) directors. The report, *Who Will Run America’s Public Health Labs?*, anticipates about 13 vacancies in state PHL directorships over the next five years, with a pool of replacement candidates that current lab directors describe as either “not adequate or only marginally adequate in size to meet the future demand.”

“Is it a crisis?” queried the study’s principle author, Ernie Schoenfeld, associate dean of the School of Public Health at the University of North Carolina-Chapel Hill. “Probably not. Is it a serious situation? Definitely.” Moreover, said Schoenfeld, the pending shortage represents only “the tip of the iceberg.” “There simply aren’t enough individuals coming through the system” to receive adequate training to take over director posts six or more years out, he said. (The report finds that state directors have an average of 20 years experience in laboratory administration and 10 years tenure in their current position, while local directors have 17 years of experience and 11 years of tenure, on average.)

Eric Blank, director of Missouri’s state PHL and a key individual responsible for initiating the study, said he is already worried about “sustainability” issues related to an emergency response. In his laboratory, for example, very few people are qualified to handle the complexity and volume of work necessary to respond to the anthrax scare. That has meant exceeding long hours for some. “We can’t depend on just one or two people to pull that kind of time,” he said. “And what happens when those people aren’t available?”

(A U.S. General Accounting Office report, released in September, likewise raises concerns that “reductions in public health laboratory staffing and training have affected the ability of state and local authorities to identify biological agents.”)

Schoenfeld described the current situation with a sense of déjà vu, recalling that “CDC came to this same conclusion (that there is no obvious pool of candidates for PHL directorships) in the 1950s.” At that time,
the Laboratory Practice Training Program, a doctoral program at UNC-Chapel Hill, was created to attract and train a future generation of lab directors. This time the answer is not so straightforward. “The field is so rapidly changing,” said Schoenfeld, “that no single education or training program can prepare anyone for what they will face in the future. Every lab in America is now testing for anthrax. Would we have expected that six months ago?”

A Plan for Action
The APHL study concludes that “development of public health leaders requires a systematic, interactive, ongoing process, in which training experiences are combined with on-the-job practice of new skills.” The 308 PHL directors and city/county health officers who responded to the survey that informs much of the report indicated that formal degree programs are probably the most effective mechanism to teach scientific and technical skills, but cited on-the-job training as essential to impart managerial know-how. Nonetheless, most respondents anticipated a decline in the amount of time directors devote to training and staff development activities over the next five years.

The report recommends a comprehensive program to recruit and train future laboratory directors; one that:

1. Targets a diverse pool of candidates, including recent alumni of graduate programs relevant to laboratory science, practicing mid-level PHL managers, and practicing managers in clinical laboratories.

2. Creates educational and training opportunities that emphasize emerging scientific disciplines—environmental science, epidemiology, genetics, and virology—and multidisciplinary strategies for organizing laboratory research and public health investigations.

3. Creates educational and training programs that teach the specialized management and leadership skills needed to work with diverse constituencies for varied purposes.

4. Stresses accelerated learning that is grounded in the application of skills in laboratory settings (likely involving distance learning programs and partnerships between academic institutions and PHLs).

Schoenfeld said APHL is discussing with CDC and foundations the creation of a national center for PHL leadership that could undertake some of these activities and help build the skill sets necessary to run a modern public health lab.

Overall, the APHL study identifies four areas in which PHL directors must be proficient: management, scientific and technical knowledge, public policy, and personal skills (including communications, information management, leadership, adaptability, and marketing). While the laboratory manager of the 1950s was generally a “chief technologist” who received on-the-job training, laboratory directors of the 21st Century must be as familiar with microbial assays and polymerase chain reactions as they are with budgets, strategic plans, regulatory matters, and the needs of external clients—clinicians, state and local health departments, law enforcement agencies, the media, and others.

In fact, the report finds that the scope of activities performed by PHL directors is heavily weighted toward managerial responsibilities. On average, directors devote only about a third of their time to the practice of laboratory science; the remainder is spent attending to business and communications activities. Yet Blank noted that already laboratory directors have been replaced “in some cases by people without much public health experience and without good laboratory management experience.” He added, “I don’t know where Missouri is going to find a new director when I decide to hang up the spurs.”

Changes expected over the next five years will likely reinforce the need for managerial skills, placing more importance on constituent relations, participation in the policy-making process, and marketing and outreach to promote lab services. Salient trends include:
During two world wars in the first half of the 20th century, state and territorial public health laboratories served on the front lines in the fight against sexually-transmitted diseases.

The battle against syphilis, gonorrhea, chlamydia and a host of other venereal diseases put the nation’s public health laboratories in the forefront of a scientific and public relations offensive that would mark the careers of a generation of public health laboratory directors. The offensive also would prepare American public health laboratories for the fight against other health threats in the second half of the 20th century. Many of the public health laboratory personnel who learned their trade in the war against sexually-transmitted diseases applied those lessons to breakthroughs in testing for food-borne illnesses, tuberculosis, childhood diseases and HIV outbreaks in the years to come.

The development of the Wasserman and other tests in the years following World War I, and the vast increase in state-mandated, pre-marital blood testing during the 1920s and 1930s gave state and territorial public health laboratories new tools in the war against sexually-transmitted diseases. America’s participation in World War II gave the nation’s public health community ample opportunity to practice the tools of its trade.

Venereal Disease: The Wartime Threat
Whenever large numbers of young men gather for wartime military duty, disease is an ever present threat. High on the list of pathogens that can incapacitate an army are sexually-transmitted diseases. Since the time of the armies of the Caesars, venereal disease in the ranks has had the capacity to diminish a nation’s fighting forces.

Prostitution has always flourished in close proximity to military encampments. Contrary to Victorian mythology, venereal disease was a serious problem for the medical corps of both armies of combatants fighting in the Civil War. Being caught visiting a bawdyhouse—the preferred terminology during the Civil War—almost guaranteed a ticket to the Central Guard House for soldiers of the Union’s Armies of the Potomac and Cumberland.

During the Civil War, Union Army doctors treated more than 73,000 cases of syphilis and almost 96,000 cases of gonorrhea. Countless thousands of other Union soldiers were marked “absent sick” on company rolls without ever being diagnosed. The open genital sores of syphilis were as fully incapacitating to the Union Army as were the minie balls and shrapnel of the Army of Northern Virginia. It is little wonder that historian Jared Diamond linked “guns, germs and steel” in his essay on the fate of human societies.

America’s entry into World War I during the spring of 1917 created conditions that were again ripe for the transmission of syphilis and gonorrhea. One measure of the scope of the problem during the war years was the rejection of nearly 200,000 draftees because they were infected with venereal disease. Conscripts diagnosed with syphilis or gonorrhea were assigned to holding units prior to discharge. At one time in 1918, Ft. Devens, Massachusetts had a holding battalion that included 138 men with venereal disease, 151 neuropsychiatric cases and 368 conscripts with cardiovascular problems.
Conscripts were housed in camps that were frequently crowded and lacking in sanitation facilities. Camp Dix in New Jersey was built to house 38,000 trainees; in 1918, its roster counted more than 54,500 conscripts. At Camp Sherman, Ohio, recruits produced nearly one million pounds of garbage a month. The camp’s horses produced 120 tons of manure a day.5

And every military training camp was soon ringed by at least one nearby red-light district. Kansas City’s Twelfth Avenue sported so many bordellos that soldiers from Camp Riley in Kansas and Camp Leonard Wood in Missouri dubbed it “Woodrow Wilson Avenue—a piece at any price.”6

Army Commanders waged war against prostitutes and venereal disease. In Paris, General John J. “Blackjack” Pershing personally inspected the venereal disease returns for the American Expeditionary Force (AEF) each morning. Pershing instituted vigorous patrols of French red-light districts, and any soldier returning drunk to his camp was considered to be infected with venereal disease.7 American military leaders consistently resisted the suggestion of French authorities that bordellos be licensed and inspected, a practice the French army high command had adopted in 1914.

For those soldiers infected with venereal disease, treatment was often draconian. Since at least the Renaissance, infected soldiers had been treated with mercury rubs, which led American Doughboys to ruefully observe that they had spent “one night with Venus, and the rest of your life with Mercury.”8 A treatment just coming into vogue during World War I involved multiple injections of Salvarsan, an arsenic compound that often left the treated sicker than if they had been left untreated.9

Military and civilian public health laboratory personnel did have one new tool to detect the presence of syphilis. The Wasserman Test, introduced in 1906, was the first effective blood serum test capable of identifying venereal disease in the laboratory. Discovered by bacteriologist August von Wasserman of the Robert Koch Institute in pre-war Germany, the Wasserman Test provided a simple and cost-effective laboratory blood procedure for the identification of syphilis.10 By using a cardiolipin beef-heart antigen, the laboratory technician could quickly identify the presence of this dreaded illness.11

World War I provided the public health laboratory community with training and experience in combating a specific public health threat that would become the preoccupation of many state public health departments during the 1920s and 1930s. Thousands of public health personnel gained invaluable experience with the Army Medical Corps in the fight against venereal disease during World War I. When many of those military public health personnel returned to civilian life in 1919, they brought their expertise in battling venereal disease and other public health threats back to state health departments and their laboratories. At the beginning of World War I, only one-third of state public health laboratories had facilities for the performance of Wasserman Tests.12 By the time the U.S. entered World War II a quarter-century later, syphilis serology would be the leading activity, by volume, of nearly every state and territorial public health laboratory in the nation.

The Push for Pre-Marital Screening

The U.S. Army’s experience fighting venereal disease during World War I, and the widespread introduction of the Wasserman, Kahn, Kline and Hinton Tests in the years following the war led to the passage of numerous federal and state syphilis serology statutes during the 1930s. Known collectively as pre-marital testing, the statutes generally required couples to submit a blood sample to the state public health laboratory for testing of venereal and other diseases before a marriage license was issued.

For most states in the 1920s, pre-marital serological testing in state and territorial public health laboratories was sporadic and voluntary. Most state and territorial public health laboratories concerned themselves with testing for contagious diseases such as tuberculosis and diphtheria, testing community water and wastewater systems for bacteriological and chemical contaminants, and testing the community’s milk supply.13 Most public health laboratories in the South provided fecal testing for intestinal parasites, primarily hookworm.14
Texas was typical of the workload faced by state and territorial public health laboratories during the 1920s and 1930s. The state’s three public health laboratories had been consolidated in Austin in 1928 as the Bureau of Laboratories of the State Health Department. For much of the next decade, the bureau’s focus included bacteriology, mycology, virology, parasitology, entomology, biological production and environmental chemistry. The Bureau of Laboratories began producing smallpox vaccine in 1936, and the volume of tests increased dramatically during the decade of the Great Depression.\(^{15}\)

Much of the increased volume stemmed from the bureau’s syphilis serology division. The bureau began conducting pre-marital Wasserman Tests in 1922.\(^{16}\) By the mid-1930s, the bureau was supplementing its Wasserman Tests with the equally accurate and less labor intense Kahn, Kline and Hinton Tests. And syphilis serology would take on far greater importance in the decade ahead, not only for Texas but for the entire public health laboratory community in the U.S.

Syphilis serology was not without controversy. Critics charged that pre-marital blood screening was an invasion of privacy and that the public health and medical communities had no business enforcing public morality.\(^{17}\) Nevertheless, public support, especially at the state level, enabled the growth of syphilis serology programs.

That all changed in 1935 when the federal government got involved in the war against venereal disease. The Great Depression and President Franklin Delano Roosevelt’s New Deal marked the beginning of a decades-long process of federal government participation in the affairs of its citizens. On the public health front, the passage of the Social Security Act of 1935 provided the first significant federal funding of state public health initiatives. Title VI of the act “established a permanent machinery for distributing federal funds for health purposes and recognized special needs for allocating these funds.”\(^{18}\) Those “special needs” included grants-in-aids to the states—administered by the U.S. Public Health Service—to establish beefed-up syphilis serology programs to identify and contain venereal diseases.

Three years later, Congress passed the National Venereal Disease Control Act of 1938, a piece of landmark legislation for the nation’s public health community. In little more than five years, the federal funding flowing into state and territorial public health laboratories caused syphilis serology testing on the state and territorial level to jump three-fold.\(^{19}\) The act appropriated $3 million for distribution to the states under the direction of the surgeon general.\(^{20}\)

The federal legislation unleashed a wave of state laws mandating pre-marital, and in some cases maternal testing. In the two years following the passage of the 1938 act, 19 states passed legislation requiring marriage partners to be tested for venereal diseases. All but two of the 19 states also required venereal disease serology testing for pregnant women.\(^{21}\)

Governor M. Clifford Townsend signed Indiana’s bill requiring standard serological tests for syphilis for potential marriage partners and expectant mothers on February 18, 1939.\(^{22}\) The general assembly in neighboring Illinois passed a law mandating pre-marital testing in 1937 and amended the law to include pre-natal testing in 1939.\(^{23}\) Indiana’s pre-marital testing law went into effect on January 1, 1940, the same day on which mandatory pre-marital testing became effective in nearby Kentucky. The Indiana State Health Board had embarked upon an anti-syphilis campaign as far back as 1933. But the infusion of federal funding following the passage of the 1938 federal law, as well as an increase in state funding in the wake of the 1940 Indiana law, allowed the state health board to significantly increase its efforts in the war against venereal disease.

Dr. Verne K. Harvey, director of Indiana’s state health board, reported in the summer of 1938 that the state was using nearly $60,000 of U.S. Public Health Service grants – an immense amount at a time when the average state worker made less than $1,200 a year—to supplement its ongoing anti-syphilis campaign. Harvey noted that the money would be used for epidemiological follow-up of active syphilis cases to prevent spread of the disease; an extension of laboratory facilities to rural areas of
the state; an educational campaign; and creation of a consultation service for physicians to acquaint the
state’s medical community with new diagnostic and treatment protocols.

“Funds for this purpose have been very inadequate up to now,” Harvey told reporters. “The allocation
from the federal government is approximately what we figured we would receive for our program.
With the aid of these funds, we can enlarge the program we now have.”

Results of the testing in Indiana were mixed, to say the least. During the first 12 months of the new law,
nearly 65,000 Hoosiers submitted to pre-marital testing. The 1.6 percent syphilis rate was well below the
estimated 10 percent rate that supporters of the law had predicted. During that first year, the state tested
more than 31,000 expectant mothers, and only one percent tested positive for syphilis.

Supporters of the law defended the legislation, noting that couples suspecting one or both partners were
infected with syphilis could go to one of the 25 states that did not require pre-marital testing and get their
marriage license. Supporters also noted that syphilis was a far greater problem in the state’s big cities than
in rural areas and small towns. The Indianapolis Medical Society and the Indiana State Health Board
reported in 1940 that upwards of 30,000 residents of the state’s largest city were infected with syphilis.
The report noted that almost one-quarter of the residents admitted to the state’s mental hospital during
the previous fiscal year had syphilis, as did 15 percent of the inmates of the Marion County Jail.

Syphilis serology and the accompanying wave of state laws mandating pre-marital and pre-natal testing
dominated the programs of the state laboratory directors conference from 1937 to 1939. The 1937
conference in New York featured a round table on syphilis serology that focused on preliminary findings
from a U.S. Public Health Service survey on state and territorial public health laboratories. A follow-
up study by the U.S. Public Health Service in 1940 found that “serologic tests for syphilis represent
approximately two-thirds of the entire diagnostic laboratory work of state health departments for all
communicable diseases.”

Moral questions aside, syphilis serology sharply increased the volume of testing at state and territorial
public health laboratories during the 1930s. And the workload was to get even heavier in the war years to
come.

World War II and Beyond
The December 7, 1941, Japanese attack on Pearl Harbor found the U.S. public health laboratories in an
expansionist mode, thanks mostly to the increase in syphilis serology. Armed with the 1938 National
Venereal Disease Control Act, the federal government began concentrated efforts in 1939 to reduce the
incidence of venereal disease among draftees and enlistees for the war that Washington knew was coming.
In that year, the army, the navy and the Federal Security Agency promulgated an eight-point plan to
combat syphilis at army and navy installations.

The plan recommended aggressive cooperation between military police and local law enforcement agencies
to close down houses of prostitution. It also envisioned increased funding for public education programs
to warn against the danger of venereal disease. Finally, it mandated syphilis serology testing for all
inductees to the nation’s armed forces.

State and territorial public health officers adopted the military recommendations in mid-1941. For the
bulk of the war, the state and territorial public health laboratory was the primary responder for syphilis
serology testing.
The volume of testing increased dramatically following the Japanese attack on Pearl Harbor. In the spring of 1942, the Bureau of Laboratories of the Texas Department of Health was testing as many as 3,000 specimens a day at its Central Laboratory in Austin. The sheer volume of testing soon overwhelmed the Texas laboratory, and in late 1942, Dr. S.W. Bohls and Dr. J.V. Irons, the director and associate director of the laboratory, used federal funds to set up 15 regional laboratories around the state to lessen the load on the Central Laboratory. Laboratories were established from Abilene to Corpus Christi, and local communities were required to furnish only a building and pay monthly utilities.

The war stretched the public health laboratory community to the limits. Besides the problem of coping with millions of syphilis serology tests, laboratorians had to cope with shortages of both manpower and material. At the 1943 annual meeting of the Conference of State and Provincial Public Health Laboratory Directors, Conference Chairman C.A. Hunter of Kansas reported that hundreds of laboratory technicians and bacteriologists from around the country had already joined the armed services. Hunter also noted that the U.S. Army had approached the conference with a request for an additional 200 bacteriologists with public health experience.

The technique that wartime public health laboratories used to detect the syphilis spirochete was little changed from Wasserman’s original tests nearly 40 years before. Laboratory technicians placed blood samples in cardiolipin, a beef-heart antigen, and waited for the resulting tiny flakes to react chemically in the presence of the substance called reagin.

The tests were effective and inexpensive. When Carl Blank went to work at the Utah Department of Public Health in 1951, fresh out of college at the University of Toledo, syphilis serology still comprised the biggest volume of work at the department’s laboratory. “We had a large volume of those tests, somewhere in the neighborhood of 400 tests a day,” Blank recalled. “And it cost less than 50 cents a test to run these.”

By the time Blank started his public health laboratory career, however, the public health community’s focus on pre-marital testing had begun to wane. World War II ended in 1945 with the lowest incidence of syphilis among military personnel in American history. That was due in part to federal, state, and local efforts to identify and eradicate syphilis. The public health laboratory community did its part to identify venereal disease, but the widespread introduction of penicillin and sulfa-based antibiotics during the war proved to be the first truly effective treatment for syphilis and gonorrhea.

Federal interest in funding the war on syphilis dropped off rapidly in the postwar years. The technology transfer that made antibiotic prophylaxis for venereal disease standard practice in the 1950s, coupled with society’s increasing opposition to government-imposed morality, rendered most of the state pre-marital testing laws ineffective by the 1960s. In addition, an increasing number of couples were cohabiting without the benefit of formal marriage ceremonies.

By then, states faced new public health issues. But syphilis serology had provided a valuable training ground for a generation of public health laboratory personnel. They would use those lessons to lead the public health community in new directions in the years ahead.
My October Minute message sketched the interactions I had with the press regarding potential bioterrorism scenarios and their prevention. I ended the column noting that a case of anthrax had just been reported in Florida, but I did not speculate about its transmission; natural or intentional. However, in a talk that I gave in Iowa on October 7, I supplied two possible explanations for that anthrax case: either it reflected vastly increased sensitivity to the detection of natural disease on the part of the healthcare community or it was the first of a probable series of infections attributable to bioterrorism. Anticipating that the latter explanation was correct, I went on to say that individuals can do a number of things to deal with the prospect of bioterrorism:

- Read credible literature, especially Germs by Miller et al.
- Report unusual events (e.g., insecticide spraying in November in Iowa).
- Accept new constraints, such as restrictions on coolers in public stadiums.
- Know that even though the societal risk of a bioterrorism event is high, personal risk is low.
- Understand that masks and antibiotics will be of little use to most individuals, although those at increased risk will benefit from appropriate protection.
- Draw on the resilience that you have inherited from your ancestors.

In later talks, I added a seventh bullet: Participate in the civilian defense system by analyzing situations and acting rationally upon their conclusions. For example, white powder in used grocery bags is likely to be flour and should be discarded. Also, when you spill a powder, clean it up so it does not unnecessarily arouse the suspicions of others. The New York Times subsequently published a critique of federal communications to the public, concluding that the government should not restrict itself to the most optimistic explanations for events and should tell people what they can do for themselves. Iowans tend to be stable individuals, but perhaps these messages helped to augment that tendency!

Iowa later became the focus of media attention when the initial Florida anthrax case was said to be due to the “Ames” strain and to be “man-made” in an Iowa laboratory. The New York Times pictured our laboratory on its front page, protected by National Guard troops whose purpose was to assure Iowans that they were safe (at least from the anthrax spores in that one lab). I spent the next several weeks inundated with calls from the press. I prioritized my efforts as first for the laboratory, second for local media, and third for national (and international) media. Each day ended with messages left to answer.

The National Guard is gone now and we are devising and instituting new security procedures. Lab security is ever more important now that we are guarding potential bioterrorism agents as well as the public health. Public health laboratories deserve classification as critical infrastructure and, as such, they require protection no less than our tunnels and bridges.

Critical infrastructure protection was just one of the ten recommendations I made for public health laboratories in a lecture at the Institute of Medicine for its 2002 report on emerging infectious diseases. The institute’s 1992 report had just one recommendation for public health laboratories and that pertained to military laboratories overseas. Please thank Scott Becker and company for connecting us to so many important venues that will enhance our ability do our jobs well.

I was called to testify before the Senate subcommittee on health and human services appropriations by Senator Tom Harkin (D-IA). His office called just 36 hours before the hearing, so I was challenged to devise effective wording virtually instantaneously. However, the anthrax-tainted letter sent to Senator...
Tom Daschle (D-SD) even affected the testimony. Closure of Senate office buildings resulted in delays and venue changes, and the hearing ultimately took place in the Capitol on the Congress’ first day back at work. Jeff Jacobs and other APHL staff ably polished my draft testimony and documented the process (Page 17). The testimony focused on funding. Three hundred million dollars was requested to fund the Laboratory Response Network (LRN), the National Laboratory System and chemical biomonitoring. After irradiation of mail was proposed as a safety measure, several of you expressed concern about its impact on the integrity of some of our specimens. APHL has worked to address that problem, and we await a final resolution. (The U.S. Postal Service (USPS) is considering other safety options.)

The mail was brought to our attention again when we were approached by the USPS to help test swab specimens from various postal facilities. Scott, Carol Clark and I met with USPS officials on a Sunday afternoon, teleconferencing with a swat team of APHL members around the nation. A protocol was developed in record time, moving the responsibility westward overnight to those who still had a wakeful hour. The LRN’s work testing environmental samples for the postal service was judged by our contact there as one of the greatest triumphs of his experience. We expect to receive a letter of commendation that you may celebrate with your staff and agency.

As the outbreak has settled down, it is time to focus on lessons learned and changes needed. To address these issues, a January meeting of the APHL/CDC LRN bioterrorism response team is anticipated. You may wish to register your ideas with one of our representatives: Jim Pearson, Betty Franko, and Ralph Timperi. Mike Ascher is now serving in Washington, D.C., on the special advisory team headed by D.A. Henderson that is consulting with Health and Human Services Secretary Tommy Thompson. I have been nominated to serve on an external advisory panel to the team. We had not implemented all the plans and ideas that arose when we designed the LRN three years ago. Now is the time to push for completion or alteration of the program. Untended communication issues, identifying available surge capacity and transporting specimens are high on the list of problems needing solutions.

Now that the dust, dare I say powder, has settled, please sit down and write a half-page vignette, describing a triumph or challenge that we can include in an assessment report. Put your frustrations behind you and tell your saga in a colorful way. Try to imagine what would have happened if we had never begun the preparations that we had only partially completed by this fall. Your stories may help us to sustain and augment the funding that we need to make this a truly viable operation in the event of a large outbreak.

Thank you for all your efforts on behalf of our citizens throughout this challenging year. If this reaches you before your special holiday is over, a blessed holiday to you. Finally, a wonderful New Year to you and yours.

Sincerely,

Mary Gilchrist, PhD, D(ABMM)
President
EXECUTIVE DIRECTOR’S NOTE

Since September 11, the nation has been rife with the symbols and talk of patriotism, courage, sacrifice. Here in Washington, D.C., wreaths and holiday lights vie for attention with the ubiquitous American flag. Radio stations play “Jingle Bell Rock” and “The Star Spangled Banner” back-to-back. And even commercial advertisers have capitalized on the national zeitgeist, urging shoppers to spend more and get the economy revving.

Life in the laboratories is different, I know. Yes, the symbols of patriotism may be present. But they are daily matched by the acts of patriotism: acts of true courage and dedication and sacrifice.

The current installation of our series on the history of public health laboratories (beginning on page 5) is entitled “The War Against Venereal Disease: The Public Health Laboratory, 1915-1960.” It chronicles the hard work and innovations of laboratorians in the period encompassing World Wars I and II.

Needless to say, America is again engaged in a conflict of global proportions. It doesn’t take much imagination to write the headline for the current, still-unfolding chapter of our collective history: “The War Against Terror: The Public Health Laboratory, 2001-?” This time, however, the battlefield is ill-defined and close to home. Airplanes, postal facilities, and public health laboratories are on the front lines.

I have spoken with many of you and don’t consider it an overstatement to say that the past few months have been a battle. The Washington Post tells the story of Jafar Razeq, the chief public health microbiologist in Maryland’s state lab in Baltimore:

One night recently, Razeq said he was going to work when his (young) daughter approached him with tears in her eyes. “She’s been hearing about anthrax like everybody else,” he said. “She told me ‘Daddy, take care of yourself.’ I told her, ‘I selected to be a microbiologist. I am going to fulfill my professional requirement. And I will take care of myself.’”

I know laboratorians who have been called out in the middle of the night by highway patrols and sheriffs to receive potentially lethal specimens, and many, many laboratorians who have worked evenings and weekends to ensure quality testing. Despite the pressing demands of the lab, APHL members have found time to provide credible, scientific information to media outlets across the country. They have also worked closely with the CDC and colleagues in other states to provide surge capacity for the most overburdened locales.

I am personally grateful to Oregon’s lab director, Mike Skeels and APHL President Mary Gilchrist who found time to brief me on the complexities of anthrax testing so that I could better communicate with the media. The Association owes a debt of gratitude to Tony Sambol, Nebraska’s laboratory program advisor. Tony came upon request to Washington, DC to coordinate the U.S. Postal Service (USPS) national testing process. Within four days, Tony was sitting in the incident command center of USPS headquarters in Washington, D.C., where he manned the ‘APHL desk’ for nearly a month. If any single person helped to bring order out of chaos, it was he.

Yet, despite the entirely new occupation laboratorians have assumed since September 11, the Minute reminds us that the routine work of the laboratory has never stopped. The Food and Drug Administration just approved a new tuberculosis test—Quantiferon. Guidelines for HIV-related CD4 T-Cell determinations
are being revised. Genetics testing is coming into its own. And some of our members have given careful attention to the problem of training a new generation of public health lab directors.

Our cover story notes that public health laboratories are finally being recognized for their service to the nation. No less than the soldiers in Afghanistan, I consider our members American heroes.

Wishing you a happy and peaceful New Year,

Scott J. Becker
Executive Director

AWARDS

**Global Health Program Wins Golden Circle Trophy**

The American Society of Association Executives (ASAE) has honored APHL’s Global Health Program with its prestigious first place Golden Circle Award for International Programs. The award was given for the AFB smear microscopy training products that are available in Spanish, French, and English. Winners enjoyed a lavish evening awards salute at the ASAE Management and Technology Conference and Exposition at the Baltimore Convention Center last December.

The training product was developed in collaboration with CDC, the World Health Organization, the Pan American Health Organization, the International Union Against TB & Lung Disease, and INDRE (Mexico’s national laboratory). It includes distance learning training components for direct AFB smear microscopy that is performed in laboratories around the world to detect tuberculosis.

This project set out to develop training materials in multiple languages for distribution in Latin America, Asia, and Africa. The format of the various training products was designed to assure optimal delivery of the technical content and to be compatible with the educational technologies likely to be available in developing countries. Products include a 30-minute training video (in various frequencies), a set of 2x2 Kodachrome slides with audiocassettes, and a training manual that can be used with or without the videotape.

APHL’s technical representative, Ken Jost Jr. of the Texas state laboratory remarked on the value of the training products, saying they provided “an outstanding opportunity to learn firsthand from global TB experts about their individual experiences and perspectives.” He noted that the training materials have already “proved very valuable in ongoing collaborations between TB laboratories in Texas and Mexico.”

Video producer Geri Lennon (of Lennon International Video Enterprises) pointed out that “the instructional level remains consistent with or without formal presentation. Even in the most remote countryside, these easy-to-use materials can be utilized in varying formats reflecting the needs of the region.” He concluded, “These training products have the potential of creating a true multinational education base for the practical diagnosis of TB.”

The training products have also received a Videographer Award for excellence in video production and a Top 100 Award from the *AV Multimedia Producer.*
MEMBER NEWS

A Member Retires, While Five are Appointed to New Positions

Ronald Cada has retired from his position with Colorado’s state public health laboratory (PHL). Cada worked in public health for 33 years, beginning as a microbiologist, and later becoming an assistant professor at the University of Texas School of Public Health. Cada left Texas to head to Iowa where he rose to the position of assistant director of the University Hygienic Laboratory before returning to the Colorado state PHL in 1985. Cada spent 16 years working in the Colorado state lab, first as director and then as technical director for the entire state division of laboratories.

During his 33-year career in public health, Cada was instrumental in the evolution of the Association of State and Territorial Public Health Laboratory Directors into what is known today as the Association of Public Health Laboratories. His commitment to the association was unwavering. Cada served as president, secretary-treasurer, chair of the Taskforce on the Core Functions of PHLs, and chair of committees dealing with nominations, management information systems, laboratory initiatives, and annual meeting planning. In all, Cada served on more than 11 APHL committees.

APHL Executive Director Scott Becker credits Cada with helping to “ground some difficult discussions.” “Ron always kept the members in the forefront of any association discussion,” he said.

Mike Kimberly, director of laboratory services for Tennessee, considers Cada “a close personal friend, a professional and an all around nice guy.” He remarked, “Ron was a tremendous asset to APHL as a state member and will still be in his new role as an emeritus member. He... was an asset to the whole public health laboratory system.”

Finally, Jim Pearson, Virginia’s state PHL director, described Cada as someone willing “to challenge the status quo.” He said, “In meetings Ron would come to listen, to challenge, and to seek to understand. I do not remember a meeting without Ron contributing in a positive fashion to the final product.”

APHL wishes Cada the best in his retirement and looks forward to working with him in the future as an emeritus member.

APHL would like to congratulate the following individuals on their new appointments:

APHL congratulates Mike Ascher, who has been appointed the senior advisor for laboratory issues for the Department of Health and Human Services (DHHS) Office of Public Health Preparedness. Ascher will work with D.A. Henderson, the newly appointed director for the Office of Public Health Preparedness. He is on an interagency personnel agreement, where he is being “loaned” to DHHS for an extend period of time. APHL looks forward to working with Ascher in his new role.

Bill Becker, Ohio’s state laboratory director, was appointed to the board of governors of the board of registry for the American Society of Clinical Pathologists (ASCP). Becker is honored to be selected for this position and looks forward to working closely with both APHL and ASCP organizations.

The Oklahoma public health laboratory has a new director, John Mathewson. Mathewson comes to Oklahoma from the Houston Department of Health and Human Services, where he served as chief of clinical laboratory services.

Maurice Knuckles has officially been appointed director of the District of Columbia Public Health Laboratory. Previously, he served as the laboratory’s interim director.

Dave Butcher has been appointed as the new APHL state member for Colorado. Butcher was formerly a Colorado delegate member.

APHL welcomes all new members and is delighted to continue its working relationship with those shifting to new positions.
STAFF NEWS

APHL would like to welcome five new staff members:

Hetal Dhagat is our new Global Health Program assistant. Dhagat, who has a degree in international relations from Tufts University, spent the last year teaching English in Nosara, Costa Rica. She is proficient in English, French and Spanish. Dhagat can be reached at hdhagat@aphl.org and extension 210.

Blair Farr is the association’s newest intern. Farr graduated from Princeton University in spring 2000 with a degree in English. After spending a year at the United Nations in New York City and a month volunteering at a children’s hospital in Siem Reap, Cambodia, she is happy to be back in her hometown of Washington D.C. Farr will work on an assortment of assignments covering all program areas. She can be reached at bfarr@aphl.org and extension 227.

Shoolah Escott, the former Regional Coordinator for the Northeast National Laboratory Training Network (NLTN) Office, will be working with APHL as a CDC training advisor for the Northeast NLTN Office. She can be reached at sescott@nltn.org or at (617) 983-6284.

Patricia Dostert is the new manager of APHL’s Midwest NLTN Office. Dostert has an extensive background working in clinical laboratories, as well expertise in business operations and organizational management. She is a medical technologist by training and has a master’s degree in health administration. Dostert can be reached at (312) 793-7213 or via email at pdostert@ameritech.net.

Betsy Szymczak will join APHL on January 14 as the manager for the Northeast NLTN Office. Szymczak is a medical technologist by training and holds a master’s degree in medical laboratory sciences. She has worked with non-profit organizations and clinical laboratories, and has experience training individuals in the academic setting. After January 14, Szymczak can be reached at (617) 983-6281.

SUMMARY OF RECENT BOARD ACTIONS

The APHL Board of Directors met on December 8, 2001. Below please find a summary of recent Board actions. For more information, or if you wish to have a full copy of the minutes sent to you, please contact Kelly Deeb via email at kdeeb@aphl.org or at (202) 822-5227, ext. 221.

- Approved an international travel policy for association members and staff
- Accepted a committee recommendation that the association hold a newborn screening & genetics testing symposium in 2002
- Received a report of the association’s “clean” audit
- Accepted ASTHO’s offer to explore holding a joint annual meeting in 2004
- Approved the Management & Information Systems Committee request for survey oversight
- Approved a line of credit application to assist with “cash flow” for Hurricane Mitch & Georges Project
- Approved the association’s coordination of USPS western region testing project
- Approved NEDSS white paper
- Authorized the association to conduct a bioterrorism survey.
EID FELLOWSHIP NEWS

APHL’s EID Fellows Continue to do Great Work in Their Host Laboratories

The association is proud to congratulate two former program fellows who co-authored articles published in the July-August 2001 Emerging Infectious Diseases Journal:

Class VI International EID Fellow Hanna Bin co-authored “Isolation and Characterization of West Nile Virus from the Blood of Viremic Patients During the 2000 Outbreak in Israel.” Dr. Bin is from Israel and spent her fellowship year studying West Nile Virus at the Wadsworth Center, New York State Department of Health in Albany.

Kristy L. Gottfried co-authored three articles: “West Nile Virus Isolates from Mosquitoes in New York and New Jersey, 1999,” “West Nile Virus in Overwintering Culex Mosquitoes, New York City, 2000,” and “First Isolation of LaCrosse Virus from Naturally Infected Aedes albopictus.” Gottfried was a Class V fellow who completed her training program in the Division of Vector-Borne Infectious Diseases at CDC’s Fort Collins, Colorado site.

In Other EID Fellow News:
Class V Research Fellow Julie Deardorff will soon have an article published in the Applied and Environmental Microbiology Journal of the American Society of Microbiology. Deardorff completed her two-year fellowship program at the San Diego County Public Health Laboratory in September 2001. Her report, entitled “Detection of Enteric Viruses in San Diego County Storm Drains” is the culmination of her research on bacterial contamination of coastal water.

Current Class VI Fellow John R. Clayton attended the 3rd International Congress on Vector Ecology in Barcelona, Spain. Clayton works in the Division of Parasitic Diseases at the CDC in Atlanta. The work he presented in Barcelona was featured in the September 2001 issue of Science magazine, along with a photo credit.

New Fellowship Recruitment and Placement:
APHL is now recruiting the next class of EID fellows and host laboratories. In addition to postings on the APHL and CDC websites, program information has been sent to US colleges and universities. We encourage prospective host laboratories to market the program to interested parties in their area; Marketing material is available from APHL.

We anticipate a record number of applications in 2002. The new application and timetable for training and research fellowships is available online and by mail. The application deadline for fellows is March 1, 2002. The new host laboratory application is also available from APHL. The deadline for receipt of completed host laboratory applications is March 15, 2002.

For further information or an application for the EID Fellowship or EHLS Traineeship Programs, visit APHL’s website at www.aphl.org, or contact Heather Roney, Fellowship Program Manager, at hroney@aphl.org, or (202) 822-5227, ext. 218.
EMERGENCY PREPAREDNESS & RESPONSE

Gilchrist Speaks Up for PHLs. An APHL Staffer Observes.

On October 23, APHL President Mary Gilchrist testified before the Senate Appropriations subcommittee on labor, health, human services, and education to urge increased spending for bioterrorism preparedness in the nation’s public health laboratories. APHL Communications Intern Blair Farr was in the audience taking notes.

The halls are empty and our footsteps echo as we walk through the maze of deserted corridors. Earlier that morning fears of anthrax contamination forced the Senate Appropriations subcommittee on labor, health, human services, and education to change venues, shuffling participants from a stately room on Capitol Hill to this informal meeting ground—a more-than-symbolic relocation that demonstrates how real the threat of bioterrorism is. Mary Gilchrist arrives early as media crews uncoil wires and position their cameras. Crossing over the threshold is like passing through an energy field. Electricity charges the air—a sense of anticipation of the critical issues at hand. As government workers, reporters, and spectators spill into the room, filling the plastic chairs, Gilchrist reviews her notes and Senator Tom Harkin (D-IA), the chairman of the subcommittee, takes his seat.

When the gavel is struck to commence the meeting, silence blankets the crowd and the first two witnesses, CDC Director Jeff Koplan and Federal Bureau of Investigation (FBI) representative J.T. Caruso, deliver their testimonies. Amidst an air of tension, Senator Harkin questions the CDC about its failure to recommend prophylactic medication for the entire Brentwood mail staff after a worker died from inhalation anthrax. He presses the FBI about its seemingly tenuous coordination with the CDC and urges the two groups to work together.

The second panel is less contentious. This panel is made up of drug manufacturers, doctors, and public health experts. Gilchrist is one of the last to speak, and she delivers her message with poise and authority. Gilchrist talks about the important role that public health laboratories play in the face of bioterrorism, and addresses three systems she believes require attention: the bioterrorism response network, linkages between public health and clinical laboratories, and the chemical terrorism response network.

With the crowd still silent, Gilchrist advocates the complete development of the Laboratory Response Network (LRN) and stresses the need to better equip public health laboratories. Adequately funding the LRN requires $125 million that she believes should be distributed to the states. Turning to her next topic, Gilchrist suggests that the National Laboratory System is another infrastructure that needs support. The NLS is crucial, she elaborates, because it will more closely bind the clinical labs to the state public health labs, shoring up communication linkages between the two. Seventy-five million dollars is needed to fund the NLS.

Honing in on her third and final point, Gilchrist addresses the all-important chemical terrorism laboratory system, warning that only five laboratories across the nation have been designated to provide surge capacity to the Centers for Disease Control and Prevention. Most labs, like the Iowa public health lab, do not have the expensive instrumentation needed to fully implement this program. APHL believes that at least $100 million is needed.

Punching her three points in rapid succession, and following each one with a price tag, Gilchrist gets
Biomonitoring 101

In early November, CDC’s National Center for Environmental Health (NCEH) Division of Laboratory Science (DLS) sponsored 50 APHL representatives to attend Exposure Analysis: An Integral Part of Disease Prevention, the 11th annual meeting of the International Society for Exposure Analysis. The conference offered laboratorians and environmental health professionals an opportunity to learn about the many facets of human biomonitoring. APHL attendees have praised the conference for its technical content and networking opportunities in short notes sent with travel reimbursement requests.

NCEH/DLS presented a special biomonitoring workshop developed for APHL attendees. Senior researchers discussed biomonitoring projects, techniques, and technologies. Although some of the particulars were tough for microbiologists, there was enough general content to make the session useful.

Each morning’s plenary session featured a different keynote speaker. Richard Meyer, director of the CDC Rapid Response and Advanced Technology Laboratory, discussed bioterrorism and the laboratory role. Richard Jackson, director of NCEH, discussed security as a public health issue that is ill-served by the artificial distinction between infectious disease and environmental health. Sam Wilson, deputy director of the National Institute for Environmental Health Sciences, discussed the relationship between environmental exposures and genetic susceptibility, as well as the overwhelming need to make environmental exposure information usable by compiling a database that includes quality assurance information. Finally, Richard Belzer of Regulatory Checkbook discussed the wisdom of a national policy to focus resources to identify and prevent harmful exposures.

Among concurrent sessions on technical topics were several focusing on chemical terrorism. Speakers from the US Army Military Institute for Chemical Defense, Edgewood, the United Kingdom, and the Netherlands discussed technical aspects of laboratory analysis of environmental and clinical specimens for chemical weapons agents. Unfortunately, the Web sites they referenced for analytical methods are not available to the general public.

Testimony from page 17

her message across clearly and succinctly. Senator Harkin listens intently, leaning on his elbows, and when Gilchrist concludes her testimony he thanks her for her participation.

When the meeting adjourns, the room empties like a deflating balloon. People stream out into the hallways, filling the corridors with chatter. We are left in the room to talk to Senator Harkin’s aide and lingering reporters. The camera crews pack their cameras away, looping the wires in orderly circles. It is like watching a play set being dismantled. Copies of testimonies lie abandoned on the chairs—flimsy rectangles containing a wealth of information. Gilchrist says her goodbyes and we file into the hallway where there is a fresh feeling of optimism; a feeling that this meeting got the ball rolling in terms of state public health lab recognition, and that this ball will pick up speed as the problems of bioterrorism are confronted and aired more thoroughly. We climb the steps, making our way through the darkness and into the light.

Postscript: As the newsletter goes to press, the outcome of the appropriations subcommittee meeting—including the FY 2002 appropriations package—is still pending. APHL is hopeful that funding for public health will reach $1.4 billion, including the $300 million Gilchrist requested for the Laboratory Response Network, the National Laboratory System and chemical terrorism laboratory preparedness.
ENVIRONMENTAL HEALTH

Food Safety

Food Allergies Can Be Bothersome—And Sometimes Fatal

Gastrointestinal illnesses are often associated with foodborne pathogens or poor food safety practices. But the truth is, people are sometimes allergic to the ingredients in the food. The top eight food allergens are peanuts, tree nuts, milk, eggs, soy, fish, shellfish, and wheat, although almost any food can cause an allergic reaction.

The typical symptoms of food reactions are easily confused with an infectious disease:

- Gastrointestinal—nausea, vomiting, abdominal pain, and diarrhea.
- Systemic—anaphylactic shock.
- Cutaneous—urticaria, angioedema, and atopic dermatitis.
- Respiratory—rhinitis, laryngeal edema, and asthma.

In rare cases, life-threatening reactions can occur. Food allergy is the leading cause of anaphylaxis (potentially life-threatening hypersensitivity) outside the hospital setting, causing an estimated 30,000 emergency room visits and 150-200 deaths each year.

Food allergies can be overwhelming to deal with, but education is an ally. The degree of sensitivity to the offending food varies from person to person, and the severity of the reaction is also influenced by dose. Knowing what one’s body can handle helps to alleviate stress, as well as unwanted allergic reactions. To avoid reactions, experts recommend 1) reading the labels of store-bought foods, 2) asking questions about food ingredients and preparation when dining out, and 3) making clever substitutions to avoid problematic ingredients (for example, substituting potatoes and rice for breads and pastas in order to eliminate wheat from the diet.)

The usual treatment-of-choice for allergic food reactions or anaphylaxis is epinephrine, which has three modes of action. First, it prevents swelling of the airways or skin. Second, it prevents muscle spasms that may occur in the airways. Third, it helps to prevent a fall in blood pressure.

For More Information
The information in this article was obtained from the seminar Managing Food Allergens, offered by the Association of Food & Drug Officials. For more information, log onto the Association of Food & Drug Official’s Web site at www.afdo.org.

Drinking Water

Arsenic Rule Decision—On October 31, EPA Administrator Christie Whitman announced, via a conference call to governors and a letter to Congress, that the final arsenic standard will be 10 parts per billion (ppb). Whitman stated, “I have made it clear that EPA intends to strengthen the standard for arsenic by substantially lowering the maximum acceptable level from 50 ppb, which has been the lawful limit for nearly a century.” (To access the press release on the Internet, go to www.epa.gov, click on “More from the Newsroom” at the bottom of the page, and locate the October 31 press release on arsenic.) It is still not clear what will happen between now and February 22, the effective date of the new regulation. If the agency takes no further actions, the regulation will quietly take effect at that time. EPA’s interpretation of the three reviews conducted this summer may be made available in a Notice of Data Availability (NODA) or simply issued as a report placed into the Drinking Water Docket as a matter of record.
New Number for Poison Control—The American Association of Poison Control Centers has established a single, nationwide number to contact local poison control centers: (800) 222-1222. The closest center is identified by the area code and first three digits of the caller’s phone number. In the event of a chemical terrorism incident, poison control centers can provide information on symptoms and the best way to handle victims.


GENETICS & NEWBORN SCREENING

APHL Begins Dialogue With CDC on Genetic Testing in Public Health Laboratories

CDC’s Andrew Faucett met with staff from APHL, the Association of State and Territorial Health Officials and the National Association of City and County Health Officials in early October to discuss CDC’s role in the emerging and sometimes controversial field of genetic testing, as well as APHL’s role supporting laboratories as they become more involved in this area.

Faucett, an Association of Teachers of Preventive Medicine (ATPM) career development awardee interning with the CDC’s Public Health Practice Program Office (PHPPO), Division of Lab Systems, spent an entire morning during his two-day visit briefing staff on salient issues related to genetics and the pioneering concept of genomics. Whereas genetics is generally narrowly defined and associated with maternal and child health, genomics encompasses both genetic and environmental components. Nonetheless, the field of genetics is expanding, with genetic testing now potentially applicable to diabetes, heart disease, and other conditions.

Public health agencies, said Faucett, can play at least two roles to help the public understand and take advantage of genetic testing. They can provide genetic testing to high-risk or other groups and they can lead a community-wide discussion about potential uses and benefits of genetic testing. These activities will benefit both communities-at-large and healthcare providers.

Faucett suggested that APHL members would benefit from representation at the National Coalition for Health Professional Education in Genetics (NCHPEG), an interdisciplinary group of organizations representing public and private health professionals and consumers. Among its activities, NCHPEG has developed core competencies in genetics for all health professionals; accessible on the Internet at www.nchpeg.org/news-box/corecompetencies000. (In addition, genomic competencies for the public health workforce have been developed by the CDC and are posted at www.cdc.gov/genetics/training/competencies/default.)

In order to provide a public health context for genetics activities, Faucett suggested APHL consider incorporating genetics into other focus areas such as bioterrorism, forensics, and resource allocation (for example, using DNA analysis to gauge susceptibility to various conditions and subsequently maximizing resources for those most in need). He also suggested that APHL consider online genetics courses and/or the incorporation of genetics sessions into National Laboratory Training Network workshops. (For example, public health laboratory microbial DNA testing can serve as entrée to a discussion of susceptibility testing.)

CDC’s Office of Genetic Testing at PHPPO has indicated that Faucett can continue to consult with APHL on genetics issues over the next year or 18 months. This visit was exploratory and future visits will be more task-specific.
State Legislator Group Sponsors Genetics and Policy Forum

The National Conference of State Legislatures (NCSL), a bipartisan organization serving state and territorial lawmakers, held a genetics and policy forum in October. Guest speakers comprised a “who's who” list of experts in the likes of Francis Collins of the Human Genome Project. The sessions, ranging from workforce development to newborn screening, reflected legislators’ need to enact legislation to guide the rapid and careful implementation of genetics screening in public health systems.

Workforce Development
Sam Shekar, administrator of the Bureau of Health Professions at the Health Resources and Services Administration (HRSA), stressed the importance of an adequate workforce to diagnose and prevent genetic disorders. Genetics, he said, can no longer be categorized as a separate entity, but will be used to diagnose a broad range of illnesses. Shekar pointed out that the nation is suffering a shortage of qualified professionals. The Institute of Medicine, for example, reported in Crossing the Chasm: A New Health System For The 21st Century that genetically competent providers are in dire need. Part of the shortage, said Shekar, may result from the slow diffusion of innovation among providers. There is generally a ten-year lag between the discovery of a new medical technique and its widespread adoption by health professionals. In the case of genetic testing, however, the lag time may be greater due to a “gap in knowledge in key implementers (health professionals).”

Shekar urged state legislators to help increase the number of genetically competent health professionals. “Health professionals need assistance from policy makers,” he said. He recommended that legislators help to promote continuing education for providers and that they turn to HRSA to determine if there is an assessment of genetics education for their state or particular opportunities to implement education programs. Shekar noted that HRSA is signing a memorandum-of-understanding with the National Institute of Health and the Agency for Healthcare Research and Quality to speed collaboration at the national level.

Newborn Screening
There are 4 million children identified with newborn disorders across the nation, according to Oklahoma State Senator Bernest Cain. Yet, said Cain, state legislators do not have a clear idea about the proper role state government must play to regulate newborn screening. Moreover, he said, in a time of budget downturns, states cannot adequately address a number of related concerns, ranging from storage of test results to gaps in access to care.

Peter Van Dyck of the Maternal and Child Health Bureau (MCHB) noted that although the federal government shares financing, privacy and oversight concerns with states, when it comes to newborn screening legislation, “the first line of responsibility is the state.” The primary mission of the federal government, he said, is to help facilitate state-run newborn screening programs. To illustrate the difficulties of federal involvement in newborn screening oversight, he cited several questions faced by the federal Newborn Screening Task Force (which is co-sponsored by the MCHB):

- What criterion should be used to determine which conditions to test for?
- What laboratory methods and quality controls should be employed?
- What types of legislative measures are necessary to assure quality control?
- How should newborn screening be funded?
- What is the role of the public health system vis-à-vis the private sector?

Van Dyck noted that the task force found a variety of newborn screening standards, protocols, and guidelines in use from one state to another. He recommended that, should a similar task force be created in the future, it should clearly distinguish between state and federal responsibilities, develop minimum newborn screening standards and protocols, and identify effective strategies to enroll families in newborn screening programs.
**INFECTIOUS DISEASE**

**New Guidelines Expected for Laboratories Performing HIV-related CD4 T-Cell Determinations**

The Conference on Guidelines for Laboratories Performing HIV-related CD4 T-Cell Determinations was held November 14-15 in Orlando, Florida, with one overarching goal: to obtain input from the clinical cytometry community for possible revision of the “1997 Revised Guidelines for Performing CD4+ T-Cell Determinations in Persons Infected with Human Immunodeficiency Virus (HIV)” (*MMWR* 46:RR-2, January 10, 1997).

Through the APHL/CDC cooperative agreement, APHL was pleased to fund travel for three APHL members to attend the meeting: Bruce Robeson, with the Michigan Department of Community Health; Steven Montgomery, with the Maryland state public health laboratory (PHL); and Sue MacRae, with New Hampshire’s PHL.

Robeson and Montgomery report that the proposed guideline changes reflect changes in current technologies. The new guidelines:

- Will most likely recommend use of CD45 vs. SSC rather than forward scatter vs. side scatter for gating. Use of CD45 vs. SSC enables lymphocytes to be easily distributed even in the presence of debris and obviates the need to correct lymphocyte gating for purity. Also, when running three or four color panels using CD45 vs. SSC, gating isotype controls appear to be unnecessary and may be dropped from the procedure.

- Will include suggested validation procedures for single platform methodology. Single platform methodology appears to be more reproducible than multi-platform methods. Currently 80% of European labs use the single platform, while less than 30% of U.S. labs do. Laboratories considering a switch to single platform need to validate the new procedure. The revised guidelines will include recommendations for calibrating pipettes and demonstrating technician proficiency using pipettes.

- May include recommendations for comparing cytometer vs. hematology instrument results.

- May address the issue of properly compensating data. As the number of flurochromes per tube increases, the ability to properly compensate a sample becomes more difficult. A number of solutions were offered. One involves saving data in an uncompensated format so that data can be compensated a second time if mistakes were made in the initial compensation. (The importance of using software compensation was discussed with a request that the suppliers of the fluorochromes provide the needed algorithms.)

- May include recommendations for the minimum number of fluorochromes that should be used in T-Cell testing. As mentioned above, guidelines are needed to assure that data are properly compensated when single tubes contain numerous fluorochromes. With the increase in the number of laboratories using three or four color panels, the six-tube two-color panel may be removed from the guidelines.
• May address a new problem created by the use of four color panels. Namely, how does one assure quality results when using a single tube assay? Using two tubes—one that contains CD3CD56CD19CD45 and one that contains CD3CD4CD8CD45—and checking the sum of the lymphocytes seemed to be most similar to the current method of checking CD3 sums. Other suggested methods were 1) visual inspection of the dot plots for proper CD3 cluster dispersion and CD45 debris overlap, 2) comparing the absolute numbers obtained on the flow cytometer with absolute counts obtained with standard hematology instruments, and 3) delta checks, (i.e., rejecting counts that deviate by more than an accepted maximum deviation from a previously good count).

• May include a set of standards for use in developing countries that don’t have the infrastructure to perform the rigorous T-Cell testing that is standard in the United States and other developed nations.

The CD4 and CD8 markers may not be the only markers that can be used in monitoring the progression of disease in persons infected with HIV. The use of surrogate markers in conjunction with CD4 T-Cells was discussed. Any markers that could be used would have to be easily quantifiable, reliable and readily available. The speaker seemed to think markers for CD8 activation—HLA-DR, CD38, and CD28—might be useful in this regard. These markers were thought to be most beneficial if the CD4 count was < 50 cells/mL and the viral load was < 50 copies.

Conference participants determined that the use of stabilizing reagents requires more study before specific recommendations are included in any future guidelines.

Two companies, Beckman Coulter and Becton Dickinson, that manufacture Flow Cytometers made technical presentations.

The conference was co-sponsored by CDC’s Public Health Program Practice Office, APHL and the Clinical Cytometry Association.

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**FDA Approves New TB Test**

The Food and Drug Administration’s Microbiology Devices Panel has unanimously approved Quantiferon, a test for latent tuberculosis manufactured by Cellestis Ltd. This blood test identifies gamma interferon, believed to be indicative of a cellular response to TB infection, and may be more accurate in detecting latent TB infection than skin testing. Cellestis has been collaborating with the CDC to shepherd the assay through Phase III trials in the US. The FDA’s recommendation was based on clinical trials involving almost 3,000 participants worldwide. The studies showed that Quantiferon almost always agreed with the skin test on negative samples, but might be far more sensitive on positive samples. One condition attached to the approval was that the test should not be used within 30 days of a tuberculin skin test (TST) because the tuberculin antigen in the TST sometimes provides a transient immune reaction that might render a false positive Quantiferon result. In making the decision to endorse the test, the panel recommended that the company be required to stratify the data on the label to ensure that laboratories recognize that results may vary depending on the risk level of the population being tested. The panel also recommended that the agency require follow-up studies in at-risk populations, such as patients with HIV and those with organ transplants.
PulseNet Manager Visits CDC

Sharon Rolando joined the APHL staff in September 2001 as the PulseNet Program Manager. PulseNet, the national molecular subtyping network for foodborne disease surveillance, is administered through the CDC and is active in all 50 states. The PulseNet administration team invited Rolando to the CDC’s Atlanta campus in November for a week of introductions, troubleshooting, and planning sessions.

Staff Interactions

The PulseNet Administration Team is comprised of a dedicated and enthusiastic group in CDC’s Foodborne and Diarrheal Diseases Branch (FDDB). Bala Swaminathan has directed the program since its inception in 1996. His strong commitment to improving and enhancing PulseNet led to the recent creation of the APHL PulseNet Manager position. Priority activities for 2002 are listed in Table 1.

Susan Hunter has also been with the program since 1996 and works closely with participating laboratories to ensure timely submission of quality gels. Hunter is actively working to convert PulseNet to an on-line submission format using BioNumerics software, and she plans to participate in future conference calls involving area labs and their regional states.

Susan Van Duyne has taken on the task of updating the Quality Assurance Manual and is in the process of implementing a yearly proficiency-testing program, as well as certifying individuals for online submission privileges. Several database teams work under Hunter and Van Duyne, each responsible for an assigned pathogen. These teams have valuable ideas for improving the PulseNet Program and work hard to maintain up-to-date databases.

Key Issues

Several critical issues were identified during the visit to CDC. The first is the need for a PulseNet Web site, on which current versions of all protocols can be posted. Second, is the need to publicize CDC’s offer of free Salmonella serotyping reagents for state PHLs. Questions regarding the Salmonella serotyping program can be directed to Patricia Fields at pif1@cdc.gov. Third, is the lack of a standard set of information to accompany...
Pulsed-Field Gel Electrophoresis (PFGE) gel submissions, an issue affecting laboratorians, epidemiologists, and database managers. A computerized template that would eliminate repetitive data entry and produce comparable data sets for each isolate submitted is in development.

Projects

The PFGE Validation Laboratory, headed by Efrain Ribot and Mary Ann Lambert-Fair, is working on several projects that directly affect PHL laboratories. The first is the development of certification sets and the challenge of lyophilizing each of these isolates for distribution to participating labs. Additionally, the Validation Lab is evaluating the effect on band resolution of discrepancies in the activity of PFGE enzymes purchased through different manufacturers. Finally, the validation lab is planning to maintain a unique isolate repository. The first pathogen likely to be collected is Salmonella Heidelberg; laboratories may receive requests from CDC to submit isolates originating in their state. Rolando discussed many new and continuing projects with the members of the PulseNet administration team.

- Nancy Strockbine is working with APHL to write a request-for-proposals for research into the rapid identification of non-O157 Shiga-toxin producing E. coli isolates. Funding for this contract has been approved by the Program and Grants Office and should be distributed by June 2002.

- In January, Patricia Fields will convene a technical meeting at CDC for principal investigators from the states selected for applied research in the development of DNA sequence-based methods for subtyping of foodborne disease pathogens. Experts from academia, public health, and research will speak with scientists from each of the contracted states to develop plans for the coming year.

- Swaminathan is seeking funds for a mobile PulseNet team to provide surge capacity testing at the request of state or local public health laboratories. This team would have both laboratory and database capabilities in order to best serve the host laboratory’s needs. The first event that this team may be dispatched to is the winter Olympics in Salt Lake City.

- The annual PulseNet update meeting has been scheduled for April 8-10 in Ann Arbor, MI at the Sheraton Inn – Ann Arbor. Each participating laboratory should plan to send at least one representative (travel money should be requested in the ELC grant). The theme for this year’s meeting is The role of PulseNet in the public health response to bioterrorism. Members are encouraged to suggest topics and speakers for this event.

- Preliminary planning is underway for the next PFGE technical workshop to be held at CDC in June 2002. It will include three days of laboratory training and two days of software training. Contact either Rolando or Lambert-Fair if you feel that your state should send a trainee to this workshop.
Genetics and future predictions

Every gene will be matched with a medical condition in the next five years, according to Francis Collins of the National Institute of Health, Human Genome Project. Collins, who had no need to convince his audience of the great advances made in genetics testing, focused his attention on issues of more immediate concern to legislators: the ethical, legal, and social implications of routine genetics testing. Collins described the benefits of genetic tests, including the ability to confirm a suspected clinical diagnosis, detect a carrier for a recessive disease, diagnose conditions prenatally, screen newborns (one of the most effective public health initiatives), test healthy adults for disease susceptibility, and predict an individual’s response to specific medical therapies (pharmacogenomics).

By 2010, said Collins, predictive genetic tests will be mainstreamed into preventive medicine. Tests will be available for a dozen conditions and pharmacogenomics will be widely used, although policy makers will continue to address access-to-care issues. By 2020, a genomic therapeutic revolution will be in full swing, gene-based designer drugs will be available, and gene therapy will be the standard of-care for several conditions. (Although the price to sequence an individual human genome will be high.) Although, Collins said, genetic technology will likely gain quick acceptance, intense debates and major anti-technology movements can be expected to develop. By 2030, genomic-based health care will be the norm. As life expectancy increases, important Social Security issues will arise.

In light of these predictions, Collins left lawmakers with several provocative questions. Will effective legislative solutions to the ethical, legal, and social implications of widespread genetics testing be found? Can privacy of genetics information be protected without interfering with legitimate healthcare and research needs to access information? Can healthcare providers and the public become “genetically literate” in time to deal with the coming healthcare revolution? Will the benefits of genetics testing be available to all or only a privileged few? Will knowledge of human genetic variation reduce prejudice or increase it? Will the nation achieve consensus about the use of genetic technology for trait enhancement of one’s offspring? And will decisions about trait enhancement be left to the discretion of prospective parents?

Workforce

- A growing need for laboratories to contribute to population-based surveillance and epidemiological monitoring.
- The need for enhanced capacity to investigate emerging infectious diseases and respond to bioterrorism.
- The need to work with an increasingly diverse set of constituencies, including the medical community, private industry, academia, and policy-makers.
- The need for laboratories to assume larger roles as sources of reference, consultation, and information dissemination for other public health organizations.
- The growing imperative for laboratories to address issues of information privacy, confidentiality, bioethics, and public health law.

The search for individuals with the right mix of skills to succeed as laboratory directors is complicated by low public sector salaries and laws (notably the Clinical Laboratory Improvement Amendments of 1988) that force organizations to exclude good candidates who do not meet formal education or experience requirements.

Nonetheless, as the APHL study point outs, the search is essential:

“If uncorrected, staffing and training deficiencies will increasingly hamper efficient laboratory operations. On the other hand, rapid implementation of the strategies (recommended) will help to ensure that the United States maintains a highly trained cadre of individuals who are capable of running the nation’s labs; individuals who will respond ably and swiftly to the unforeseen public health threats of the future.”

For more information:
Who Will Run America’s Public Health Labs? Educating Future Laboratory Directors will be mailed to APHL members after the beginning of the year. Others can obtain a copy by writing to Kelly Deeb at kdeeb@aphl.org.
What Ever Happened To APHL LabNet?

APHL LabNet, an Internet-based survey and reporting database tool, has been taken off-line for the past several months for reconfiguration and refinement. We are pleased to announce that the newly designed LabNet is scheduled for release in January 2002.

Enhancements include a new user interface (i.e., a new look and feel), greater administrative capability, survey status notifications, and enhanced reporting capability. In addition, survey questions have been modified to measure each of the 11 core functions of state public health laboratories. To this end, the Annual Survey of Core Laboratory Capacities and Capabilities, which assesses general information related to core functions, will serve as LabNet’s nucleus. A second level of surveys focus on specific capacities or areas of laboratory practice within these core functions, and may include surveys developed by APHL committees. Finally, LabNet provides for a third level of ad hoc surveys, consisting of member surveys, CDC-requested surveys, etc. Eventually, all surveys developed by APHL’s committees, staff, and board will be conducted through LabNet (with results also posted there).

APHL LabNet is the only e-repository of its kind for data on state public health laboratory practice and administration. It was developed for the exclusive use of APHL members, designated CDC employees, and other approved public health affiliates.

Look for emails and mailings about upcoming surveys and information on LabNet registration beginning in January 2002. For questions or additional information, contact Stacey Banfield-Capers, Research and Information Manager, at sbcapers@aphl.org or ext. 208.

A National Laboratory System Finally Taking Shape

The National Laboratory System (NLS) is steadily moving from concept to reality. Three states—Michigan, Minnesota and Nebraska—now have funding to support a full-time program advisor to implement NLS activities in concert with the state public health laboratory (PHL) director and APHL and CDC representatives.

In Michigan, the laboratory program advisor, John Dyke, has been meeting with health professionals in focus groups throughout the state to gauge the concerns of clinical laboratorians and public health workers who are primary responders to acute and chronic public health threats. Dyke also has the benefit of input from PHL Director Frances Downes and an advisory group of key stakeholders from six state regions. Members of the advisory group include clinical microbiologists, regional PHL directors, surveillance staff from county health departments, infection control experts, physicians, physician assistants, and a proficiency testing provider.
Recognizing the lack of a reliable system to transport specimens to public health laboratories, Michigan is developing a network of transportation contractors to provide statewide coverage. (Transporting specimens was a major problem following the September 11 attacks.) Development of the specimen transportation system will be staged in order of importance as funding allows: 1) 24/7 emergency pick-up, 2) routine pick-up from public health offices, and 3) state-wide pick-up of all public health specimens.

Other activities addressed through this initiative include:

- Development of a hospital fax network for rapid communication between the state PHL and private clinical laboratories.
- Assessing *E. coli* test protocols to improve surveillance of the O157:H7 strain.
- Partnering with commercial providers of proficiency testing specimens to improve public health testing for tuberculosis and meningococcus (common meningitis-causing bacteria).
- Collaborating with state bioterrorism personnel to tailor training materials for clinical lab staff.
- Development of a laboratory-based patient tracking system to eliminate treatment gaps.
- Development of a system to notify county disease control nurses when a rabies test request is generated, thereby preventing delays in rabies prophylaxis.

An additional benefit of planning efforts for the National Laboratory System was the opportunity for advanced training for program advisors. This training, in combination with strong laboratory experience, enabled Anthony Sambol, laboratory program advisor for the Nebraska PHL, to assume the post of laboratory services coordinator for the United States Postal Service (USPS) following the contamination of several postal facilities with anthrax spores this past fall. Sambol was temporarily assigned to Washington, D.C. and remained on-site for three weeks, until all post offices had been screened. He served as a liaison among state lab directors, service contractors collecting the samples, and the USPS union and facility managers.
**Electronic Information Systems**

APHL-CDC Meeting Explores Laboratory Information Management Systems (LIMS) and Information Technology (IT) Capacity

Vital to daily laboratory operations is a method to receive and track specimens, maintain records, report results, and accumulate and share laboratory information important to public health. This past October, public health laboratory (PHL) directors, microbiologists, and information technologists from 34 states attended the four-day, Atlanta-based APHL-CDC LIMS/LITS Plus Meeting to discuss these kinds of information management needs, as well as specific enhancements to CDC’s LIMS software, LITS Plus.

Steve Hinrichs, Director of the Nebraska Public Health Laboratory, welcomed participants and explained that the first day’s work would focus exclusively on PHL information management needs. Will McHugh, chief of the Ohio Department of Health Laboratory, presented data demonstrating the status of information technology in PHLs and the critical need to develop and upgrade LIM systems. McHugh noted that 70% of the 32 laboratories responding to a recent APHL survey indicated an immediate need to upgrade their LIMS [some from the long outdated Disc Operating System (DOS)]. The majority of PHLs simply do not have a LIMS that meets their needs, he said. Why? Expense is one obstacle. The Ohio state PHL, said McHugh, received commercial vendor quotes ranging from $650,000 to $1.2 million, depending on desired features. In addition, computer system vendors cater to clinical/hospital labs and pharmaceutical companies, and, consequently, have little experience developing systems for public health reference laboratories.

CDC’s LITS Plus software was developed specifically to fill this gap, and was discussed at some length in a panel discussion led by Jack Krueger, chief of Maine’s laboratory operations section. Krueger explained that already, under the direction of Nancy Bean with the Division of Bacterial and Mycotic Diseases at CDC’s National Center for Infectious Diseases, LITS Plus has been implemented in several states.

The remainder of the meeting was devoted to an in depth exploration of LITS Plus, including overviews, discussions, demonstrations and hands-on training. By meeting’s end, more than 25 states requested implementation of LITS Plus as soon as available. (Bean anticipates that the LITS Plus with new enhancements agreed upon by participating states will be available in January, 2002.)

Yet, LITS Plus does not address the full universe of PHL information management needs. PHLs must have the resources and the capability for electronic data interchange to fully capitalize on modern technology. A majority do not, as demonstrated by the data in the accompanying table. A comprehensive lecture (presented by Jim Case from the University of California-Davis) on Health Level 7 (HL7) messaging and extensible markup language (XML), plus a presentation (given by Steve Steindel from the CDC) on coding standards emphasized the importance of moving forward with electronic data interchange as PHL information systems evolve.

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<tr>
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</tr>
<tr>
<td>Electronic capacity for outbreak detection*</td>
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</tr>
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<tr>
<td>Accept an HL7 message</td>
<td>9 of 30</td>
</tr>
<tr>
<td>Produces and accepts HL7 messages</td>
<td>7 of 31</td>
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*i.e., Other non-standardized methods, not EDI*

Over 65 meeting participants (including 17 directors, 25 information technologists, and 23 microbiologist/program managers) joined small afternoon breakout groups to develop recommendations addressing LIMS and
APHL Workshop-In-A-Box Debuted At AACTG Meeting

APHL’s updated workshop-in-a-box (WIB), _Packaging and Shipping of Biological Materials_, made its pilot debut at the annual meeting of the Adult AIDS Clinical Trials Groups (AACTG) in Arlington, Virginia, this past July.

Sixty-seven researchers—representing 32 university-based medical centers, 7 large community hospitals, and reference laboratories in 20 states plus Puerto Rico—attended the two WIB sessions. Based on session evaluations, most attendees were laboratorians or nurses with at least a bachelor’s degree. Although the content was not new for a small number of participants (18%), most (87%) indicated that they obtained information relevant to their jobs. In addition, 82% of student attendees reported that they learned information they can use in their jobs immediately.

The attendees will ultimately present the workshop to their own staff in their own institutions. Since July, the WIB has been presented ten more times at research institutions around the country.

(The AACTG is a cooperative clinical trials network funded by the National Institute of Allergy and Infectious Diseases to evaluate clinical interventions, including efficacy of drugs and evaluation of medical interventions for HIV/AIDS and its complications. The workshop includes an optional section designed for AACTG researchers that includes research protocols.)

**Bioterrorism Preparedness for Clinical Labs: The Tennessee Model**

Late this past summer, Tennessee Laboratory Services and the National Laboratory Training Network (NLTN) were struggling to fill a Level A bioterrorism wet workshop, which Tennessee had been planning for more than a year. The Tennessee state lab, under the direction of Director Michael Kimberly, had already scheduled four bioterrorism awareness seminars, one of which was canceled for lack of interest. Given this background, the planners naturally wondered if this workshop would fill. As of September 10, registration hovered at ten participants. The next day, everything changed.

As of the first week in December, Tennessee has sponsored seven bioterrorism workshops at its central lab facility in Nashville. Due to a huge surge in demand for bioterrorism training, Kimberly, State Training Coordinators Faye Abdulla and Sean O’Connell, Bioterrorism Coordinator Cindy Jackson, and NLTN staff worked together to enhance the original workshop, and ultimately developed a wet workshop that serves as a national model.

The one-day program incorporates lectures on safety, organism identification, and case histories, coupled with a hands-on laboratory component that has proven to be an invaluable learning experience for participants, most of whom have never encountered the organisms most likely to be used for biological terror attacks. A key program strength is its grounding both in public health and clinical microbiology, thanks to the participation of Vickie Baselski, a clinical microbiologist representing the American Society of Microbiology.

The course has now been replicated by other states, including Georgia, Virginia and West Virginia. South Carolina is planning three workshops based on the Tennessee model this January. In addition,
state training coordinators attending the 13th annual meeting of the NLTN-Southeastern Region participated in a “train-the-trainer” course.

Tennessee public health staff and Baselski are willing to share all of the workshop materials, including lecture texts, laboratory exercises, a CD explaining technical aspects of agents of bioterrorism, and a list of resources made available during the course. The actual organisms of bioterrorism used in the laboratory are governed by the select agent rule and must be used accordingly. For further information, contact Faye Abdulla at (615) 262-6318 or the NLTN-SE office at (615) 262-6315.

Members’ Thoughts

What are the biggest changes in your laboratory since September 11?

APHL asked a handful of members this question late last year, here’s what they said:

A lot of our efforts in the lab and a lot of our teaching as part of Level A training has been consumed by bioterrorism. We had prepared presentations (for hospital laboratories) this past summer. And the labs kept putting us off and putting us off. After September 11, they were calling us. Our chief microbiologist and I gave about 11 presentations (this fall). That took a lot of our time. But they were very enthusiastic and very receptive. That was gratifying.

M. Stephen Gradus,
Director, Bureau of Laboratories
City of Milwaukee Health Department

We seem to have crossed a line. There is a change in the intensity of what we’re doing. We’re thinking about possibilities we never thought of before. Although we had a strong, good relationship with the FBI and police before (September 11), we didn’t have the security presence we do now. I am frequently showing my identification badge, along with everyone else. It takes longer to get into the building, but no one’s complaining.

Lawrence Sturman
Director, Wadsworth Center
New York State Department of Health

We’ve had to learn a great deal in a very short time about dealing with threats to the public water supply. How do you begin to sample a water reservoir of 40 to 50 acres? What organisms should you reasonably look for? If there’s a standard protocol to test the water supply for anthrax, I don’t know what it is. Yet, when the governor’s office tells us, “You damn well better get the samples,” and “You damn well better get the test results,” you do the best you can.

Roger Carlson
Director, Bureau of Laboratories
Pennsylvania Department of Environmental Protection
ON YOUR BEHALF

Annual APHA Meeting Spotlights Global Health

In late October, APHL staff traveled to Atlanta, Georgia, to attend the 129th annual American Public Health Association conference, whose theme, One World Global Health, provided a timely spotlight on global terrorism and related global health issues.

Conference attendees were surprised to be welcomed by keynote speakers Secretary of Health & Human Services Tommy Thompson and Surgeon General David Satcher. In his remarks, Thompson emphasized the important role public health professionals play in this time of national crisis. He acknowledged various professional groups that have been critical in the fight against terrorism in the American homeland, including state and local health officials and members of the Laboratory Response Network. Dr. Satcher, in turn, spoke about the health of the nation and the unity of the global public health workforce to counter not only terrorism, but also infectious and chronic diseases.

The conference, with about 7,000 participants and over 450 exhibitors, was a success in terms of sheer numbers. From a PHL perspective, it offered numerous sessions devoted to laboratory and epidemiology concerns. Due to recent events, many late-breaking sessions focused on bioterrorism issues, such as smallpox eradication, anthrax, chemical terrorism, and the response of the New York and Virginia state health departments to the events of September 11.

APHL exhibited for the full four days of the conference, and its booth was often thronged with conference attendees newly interested in the work of public health laboratories. APHL’s global health staff delivered two presentations; one on the Hurricane Mitch/Georges project and one on joint APHL-CDC global AIDS activities.

We’ve had to spend an awful lot of time working up “powder incidents” throughout the state. All the calls come to the lab. Every seemingly minor matter is very, very time consuming.

Richard Harris
Director, Wyoming Public Health Laboratory

September 11 brought the public health lab into a different level of policy input. We used to be in the background, but this situation brought us right up front, on a par with . . . police and firefighters. We’ve been in on meetings with the governor and the state attorney general. We’ve been asked for input on anti-terrorist legislative packet. We’re actually finding out about additional federal law enforcement agencies that have jurisdiction in the state: the postal inspector, ATM, and the Secret Service. The Secret Service. Who would think? In Michigan.

Frances Downes
Director, Public Health Laboratory
Michigan Department of Community Health

Even though we are not in the United States, there has been a large increase in the number of suspicious samples we receive. We have accelerated work on a new Level 3 laboratory. We have been overwhelmed by demands from journalists and lay people for information, and from microbiologists and others in public health for professional advice. Everyone wants five minutes of my time. We have to translate documents from English to French, since most of our clientele is French-speaking. There is increased security in the labs. In the past, security was based on the protection of employees; now we need to also protect our bacteria.

Jean R. Joly
Scientific Director
Quebec Public Health Laboratory

Actually a positive change for us. We are so used to responding to outbreaks, and this (Florida anthrax crisis) was an outbreak of a different nature. We adapted quickly. We are getting a lot of attention and additional supports. (The anthrax incident) put the state lab a little more in the forefront.

Ming S. Chan
Chief, Bureau of Laboratories
Florida Department of Health
Lynn Bradley, APHL Environmental Health Program Director, represented APHL at the following meetings: Orientation Program for American Industrial Hygiene Association Laboratory Quality Assurance Program in Tucson, AZ, October 12, 2001; International Society for Exposure Analysis Annual Conference in Charleston, SC, November 4-8, 2001; Environmental Health Forum in Washington, DC, November 14, 2001.

Farhia Mussa, APHL Newborn Screening & Genetics Program Manager, represented APHL at the following meetings: National Conference of State Legislatures (NCSL) Genetics Policy Forum in Washington, DC, October 5-6, 2001; National Society of Genetic Counselors 20th Annual Educational Conference in Washington, DC, November 4-7, 2001; 11th Meeting of the Secretary’s Advisory Committee on Genetic Testing (SACGT) in Bethesda, MD, November 15-16, 2001; Symposium on Gene Expression and Proteomics in Environmental Health Research at NIH in Bethesda, MD, December 3-4, 2001.


Ralph Timperi, Director of the State Laboratory in Massachusetts, represented APHL at the following meetings: Clinical Issues in the Prophylaxis, Diagnosis and Treatment of Anthrax and Health Organizations Partners Meeting on Bioterrorism both meetings were held in Atlanta, GA, November 18, 2001.

We want to know where you have represented APHL. Please send the following information to APHL’s Newsletter Coordinator, Kelly Deeb, at kdeeb@aphl.org:

- Your name and title
- Name of meeting
- Date of meeting
- Where meeting was held
Announcements...

Advancing the National Electronic Disease Surveillance System (NEDSS): An Essential Role for Public Health Laboratories. Advancing NEDSS makes the case for active public health laboratory participation in NEDSS' design and implementation and highlights the many benefits that will ensue from increased PHL involvement. Written by APHL’s Management and Information Systems Committee and approved by the board of directors, it was printed and distributed December 2001.

Richard Steece, APHL’s Science Advisor was co-author on an article published in the Journal of American Sexually Transmitted Diseases Association. The article titled “Multisite Pooling Study Using Ligase Chain Reaction in Screening for Genital Chlamydia trachomatis Infections” was in the October 2001, Volume 28, Number 10.

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Minute Readers: We want to hear from you!

The APHL Minute is your newsletter, and we are very eager to highlight happenings in your public health laboratory and your personal career experience, including:

- Profiles of public health laboratory leaders.
- Case studies of interesting laboratory investigations.
- Significant changes in the physical infrastructure of your state’s public health laboratory system.
- Anything else of potential interest to your colleagues and peers.

In fact, we are so eager to share your news, that you don’t even have to write the story. Just contact Kelly Deeb, Membership and Newsletter Coordinator, at (202) 822-5227, ext. 221, or kdeeb@aphl.org, and we will have someone call you back to document your news.
Mark Your Calendars...

Future Meetings of Interest

Legionella Prevention Training Course will be given in the following cities: Dallas, TX on January 30-31, 2002; Montreal, Canada on March 7-8, 2002; New York City, NY on March 21-22, 2002; Chicago, IL on May 1-2, 2002. For more information about the course content, meeting sites, and hotel accomodations, visit www.hcinfo.com, call (800) 801-8050, or email seminars@hcinfo.com

FDA Science Forum—The 2002 Food and Drug Administration (FDA) science forum is set for February 20-21 in Washington, DC. It will focus on how FDA’s many scientific and regulatory disciplines support the agency’s public health programs. Day one will be devoted to a discussion of the importance of research, policy development, and review in public policy decision-making. Day two will emphasize the application of the principles of domestic and global public health surveillance to FDA’s science issues. An integral part of this year’s forum will be interactive breakout sessions in which participants discuss in depth the importance of research, review, policy and regulation in the development of FDA’s public health policies; Topics will include bioengineered foods, botanicals, bioterrorism, antibiotic resistance, children’s health issues, tissue engineering, genomics, and bovine spongiform encephalopathy. Details are posted at www.fda.gov/oc/meetings/2002sciforum.

2002 National STD Prevention Conference will be held March 4-7, 2002 at the Town and Country Hotel and Convention Center in San Diego, CA.

PulseNet Update Meeting will be held April 8-10, 2002 in Ann Arbor, MI.

NEDSS Grantee Meeting will be held May 7-8, 2002 in Atlanta, GA.

3rd National NEDSS Stakeholders Meeting will be held May 8-10, 2002 in Atlanta, GA.

2002 APHL Annual Meeting will be held June 9-11, 2002 at the Sheraton Old Town in Albuquerque, NM.

National Conference “The Public’s Health and the Law in the 21st Century” will be held June 18-19, 2002 in Atlanta, GA.
To submit an article for consideration, contact the Newsletter Coordinator: Kelly M. Deeb via email kdeeb@aphl.org