

Cal/OSHA Airborne Infectious Disease Advisory Meeting
September 28, 2005
Los Angeles

Chairs: R. Nakamura, D. Gold

Participants

Vickie Wells, OSH Manager, San Francisco Department of Public Health
Karen Graves, LA County USC Medical Center Safety Office
Steve Robles, San Bernardino Risk Management
Pamela Persaud, St. Joseph Health Systems
Mary Kochie, Cal/OSHA
Richard Weier, Kaiser Permanente
Gladys Hradecky, Infection Control Nurse, San Diego County Sheriff's Department
Sharlene Ramey Cross, Fresno County Sheriff's Department
Sally Peerbolt, Occupational Health Nurse, Riverside County Occupational Health
T. Zaroda, Infection Control, UCLA
Kathleen Moser, TB Controller, San Diego County
Vicky McGavack, Employee Health Manager, Hoag Hospital and AOHP
Teresa Fricke, Safety Specialist, San Bernardino County Sheriff
Mark Carleson, County of Riverside
Antonio E. Duran, LA County Fire Department
Chester Choi, MD, President, California Chapter American College of Physicians,
California Medical Association
Nancy B. Parris, Epidemiologist, Saint John's Health Center
Mary Mendelsohn, Infection Control, CACC, APIC, City of Hope
Marguerite Jackson, PhD, University of California School of Medicine
Lilly Kaneshige, Kaiser Permanente
Annemarie Flood, RNBSNCIC, UCLA
Judi Freyman, ORC Worldwide
Jessica Barcellona, SEIU-UHW
Rowelle Enriquez, UCLA EHS
Enid Eck, Kaiser
Patricia Lewin, MD, Kaiser
Harold Shumate, Correctional Sergeant, Fresno County Sheriff Dept.
Kay McVay, California Nurses Association
Rebecca Perkins, County of Riverside
Estelle Prendez, County of LA, Chief Administrative Office
Susan Evans, Med Tech Sup III, LA County & USC Medical Center
Charles Lohrstorfer, NP, PHN, MSN, Association of Occupational Health Professionals
in Health Care (AOHP)
Adam Wolfe, Associate Industrial Hygienist, California Department of Corrections and
Rehabilitation
Dan Shipley, Regional Manager, Cal/OSHA

Summary of Key Points

1. Most participants supported initial source control measures based on symptoms as important to controlling employee exposures to infectious disease.
2. Many participants said there should be a more specific definition of exposure incident, including which diseases are included and how to determine which employees are considered exposed.
3. Communications between employers regarding exposures are often difficult. The standard should be clear about what is expected of all employers involved, and should clarify communication with the local health officer.
4. Many participants stated that the requirements for powered air purifying respirators (PAPRs) were too prescriptive and too broad. Many expressed concerns that PAPRs were not appropriate in some clinical settings.
5. Many participants stated that medical removal protection should apply to the period when an employee is removed from his or her assignment for infection control purposes after an exposure incident. It should not include a period when an employee is ill as a result of the exposure – that is covered by workers' compensation.

Detailed Minutes

Deborah Gold opened the meeting, and introduced herself and Bob Nakamura, and then asked the participants to introduce themselves.

D. Gold gave a history of the rulemaking project. She said that the resurgence of tuberculosis in the 1980's had led to a Cal/OSHA attempt at rulemaking. This rulemaking had been dropped in 1994 when federal OSHA published its proposed rule. In 2002, federal OSHA announced that it was discontinuing the project citing a decline in TB cases nationwide. They then put respirator use for protection against tuberculosis under the general industry standard. California saw some drop in TB, but in the last several years, this decline has leveled off, to about 3000 reported cases per year. In addition, many people in health care have expressed concerns based on experience with SARS, and on concerns about pandemic flu and other emerging diseases. When Cal/OSHA took action in 2004 to be equivalent to federal OSHA in placing TB respirator use under the general industry standard (Section 5144), employers and employee organizations asked Cal/OSHA to convene a committee to consider a standard on infectious diseases. The first advisory meeting was in July 2004, and led to an emergency standard to provide an extension for annual fit-testing, and grandfathering of existing medical evaluations. There was also strong support for initial precautions for respiratory symptoms, and including those initial precautions for diseases identified by the CDC as requiring droplet precautions as well as for diseases requiring airborne infection isolation, such as tuberculosis. There was a subsequent meeting in November 2004. In the beginning of this year, there were meetings specifically for law enforcement and corrections, laboratories, and "non-traditional" environments, which include long-term care facilities, homeless shelters, home health, paramedics and EMTs and other community based services. A

number of changes have been made in the current draft, based on discussions at those meetings.

D. Gold then explained the California rulemaking process, using a chart from the Office of Administrative Law (OAL). She explained that this meeting is a pre-rulemaking activity, and there is no official proposal at this time. In order to make a regulation, the Division of Occupational Safety and Health would send a proposal to the California Occupational Safety and Health Standards Board, who would review the proposal, and when they were done with any editorial clarifications would send it to the OAL, who would publish a 45 day notice, for public comments. At the end of the 45 day period, the Standards Board would hold a hearing. All comments received at the hearing, and all written comments would be responded to. If there were changes, there would be additional notices, all within the time-frames on the chart.

Marguerite Jackson gave an update on the status of the new HICPAC [Healthcare Infection Control Practices Advisory Committee] guidelines for infection control in healthcare, and revised guidelines for tuberculosis, that are currently being finalized for approval by the CDC [Centers for Disease Control]. They expect the HICPAC guidelines to be finalized at their October meeting, and to be published by the CDC in 2006. The material regarding airborne isolation has not changed much since the draft that was published for public review in 2004. The tuberculosis guidelines are also in the final stages of revision, and are expected to be published by the end of this year. The tuberculosis guidelines will address fit-testing of respirators, airborne precautions, and ventilation in more detail. They were developed by a multi-disciplinary collaborative group. Some additional delay was introduced by a mandate from the OMB [Office of Management and Budget] for additional public review.

Definitions – Section (a)

Bob Nakamura then introduced the discussion of the definitions section. He said that many of the definitions were taken from the proposed federal OSHA tuberculosis standard, with additional definitions added to address aspects of the Cal/OSHA draft.

Estella Prendez asked what a first receiver is in relation to first responders. D. Gold and B. Nakamura explained that the concept of a first receiver was developed by Federal OSHA to describe health care personnel who receive patients from a hazardous materials release, which includes releases of biological agents such as anthrax spores. These people are different than first responders, who may also be medical personnel, but who respond to the scene of the release, and are therefore required to have a higher level of training and other protective measures under the Hazwoper standard [Title 8 California Code of Regulations, Section 5192]. Federal OSHA has said that first receivers are also covered by Hazwoper, but are expected to have lower exposures, because the only contaminants are those that are carried in on the patients or their clothing or personal effects. M. Jackson said that a definition of first responder should be added to this standard.

Mary Mendelsohn said that the title of the standard should be changed to “respiratory infectious diseases,” since portions of it apply to diseases that are not spread by the airborne route. She said that abbreviations contained in the standard, such as IDLH (referred to on p. 5) and PLHCP should also be defined. Annemarie Flood said that the definition of “TB Conversion” should be changed to reflect that localities such as Los Angeles use different criteria than the CDC in determining what constitutes a positive test. She suggested adding a reference to criteria from the local health officer. Patricia Lewin said that all of California uses the same criteria. Kathy Moser suggested adding a reference to the CTCA [California Tuberculosis Controllers Association] or to CDHS [California Department of Health Services].

P. Lewin said that the definitions of Significant Respiratory Infectious Disease and Significant Respiratory Infection Pathogen should be reworded so that people do not get the impression that tuberculosis is a disease that requires droplet precautions.

Vicky Wells said that “exposure incident” should be defined. It should include criteria for what diseases, and what types of exposures are covered. Who should be included in post-exposure follow up? B. Nakamura said that we are trying to get at the concept of exposures that are capable of transmitting disease, and asked for people’s suggestions on how to approach that. A. Flood suggested referring to “epidemiologically significant exposures.” With TB that can be a couple of hours or a couple of days. K. Moser said that the TB Division of the CDC has produced their first ever document for contact investigations, and they don’t define what an exposure is. Ten minutes can be a significant exposure. [This document is awaiting final approval by the CDC]. A. Flood said that we need to provide some guidance about who is included. Charles Lohrstorfer said it is important because it takes considerable time and effort to track exposures. Antonio Duran said that many people in the fire department may be involved in an exposure, including the engine crew, paramedics, and ambulance drivers. Who is exposed depends upon the contact the person has. For example, the captain may be somewhere away from the patient. M. Jackson said that there is a CDC document that has a table that may be helpful [Guidelines for Infection Control in Health Care Personnel, 1998, which can be found at: <http://www.cdc.gov/ncidod/hip/guide/InfectControl98.pdf>]. This document is also scheduled for revision. K. Moser said that the CDC Division of Tuberculosis Elimination has worked for years to develop algorithms for evaluating exposures, and have ended up advising using good judgment. D. Gold added that there is also an issue of differences in vulnerability among health care workers. V. Wells said that at a minimum, the definition should say who makes the determination of whether there was an exposure incident. If you give the employer the authority to decide, you should provide more guidance.

Kay McVay said that a person who has been exposed to a patient with tuberculosis should be able to receive follow-up and testing regardless of where they are standing. It seems that there are some ambulance companies that have not been diligent in identifying employees who have been exposed to infectious patients. M. Jackson said that the term “Tuberculosis infection” should be latent tuberculosis infection (LTBI). The definition of “Test for Tuberculosis Infection” should specifically mention immunoassays such as

Quantiferon Gold. K. Moser and M. Jackson said they would e-mail some suggested language for this. Sharlene Ramey said that a few of the definitions are not in alphabetical order.

K. Moser suggested that the standard might require consultation with the local health officer in making an exposure determination. A. Flood said that in a hospital setting there are often experts available to assist in making the exposure determination, but in other settings, maybe the standard should require consultation with the local health department. B. Nakamura asked if this was within the existing duties of the local health officer, and K. Moser said that it is. V. Wells said that depending on the area, it might be too much for the local health officer to handle. S. Robles said that a lot of different entities could be calling the local health officer, such as the sheriff, fire, and animal control departments. The City of San Bernardino has lots of potential exposures. K. Moser said that if the disease is TB, the contact is already required. S. Robles said that it would over-tax the local health officer. V. Wells said that TB is easy, but what about contacting the local health officer for every little chicken pox outbreak. San Francisco has a lot of chicken pox exposures, at least one isolated outbreak per year. C. Lohrstorfer said that the issue is less severe if there are immunizations available, and V. Wells agreed. M. Jackson asked if diseases requiring droplet precautions are included in exposure incidents.

Mark Carleson said that the term “occupational exposure” should not include exposure to people with “suspected” disease. That makes the definition too wide. You need to have a clearer trigger. In making a determination for his county, it leaves open whether people are exposed, and whether the exposure is suspected or confirmed. Enid Eck said that from an infection control perspective you need to do everything you can to heighten awareness and suspicion about these diseases. It’s important to build awareness that if there is someone who is exhibiting symptoms such as coughing, you need to do something. She realizes it’s hard for police to slap a mask on a person they’re wrestling to the ground, and that programs must be tailored to the specific environments. But particularly with the potential for avian flu, we need to act protectively. She is concerned about putting workers in jeopardy by narrowing the scope. M. Carleson said that in his county, they have virtually everything on the list of work environments. They have a hospital, jails, homeless shelters, police, etc. In some areas, it’s very clear cut where this applies, in others it is not. Mary Mendelsohn said that he was mixing up two terms – the definition of occupational exposure is meant to assess who is likely to be in risky situations. The definition of exposure incident applies after an incident, and that is what is being discussed. She doesn’t think most employers are against taking the precautions described here.

[M. Carleson provided the following clarification to the draft circulated minutes: “At the break, Mr. Carleson explained to Ms. Gold that his concern is that absent a clear definition of what 'suspected' means in the context of an SRID, the universe of employees that would need to be covered under the proposed occupational exposure definition of 'reasonably anticipated contact...with a person with suspected or confirmed...significant respiratory infectious disease' is unnecessarily comprehensive. Mr. Carleson has also noted that the CDC describes virtually identical symptoms for SARS and common influenza. Accordingly, absent additional guidance in the standard as

to what constitutes “suspected” in the context of an SRID, Mr. Carleson is concerned that an employer may feel obligated to include all employees in their exposure control plan that they reasonably anticipate will be in contact with individuals with “flu” symptoms.”]

A. Flood said that the handout of Appendix A from the draft HICPAC guidelines was missing every other page. M. Jackson offered to see if she could provide a list of diseases requiring airborne infection isolation or droplet precautions.

Scope – subsection (b)

B. Nakamura introduced the discussion of the scope section. He said that it had been reordered. Field operations have been separated out, and what is now subsection (7) includes outreach and administrative services for the homeless. He said one question was what outreach services should be included in this. Judith Freyman asked what the note to subsection (b) meant, and B. Nakamura responded that it was similar to language in the bloodborne pathogens regulation. V. Wells asked why long-term care facilities were being included. D. Gold responded that California Department of Health Services had circulated draft guidelines for LTC facilities, because they are considered to be a higher risk environment for tuberculosis. K. Moser said that the guidelines are currently undergoing review, and are due out shortly. The elderly have a high rate of disease, and employees at these facilities are at increased risk. She asked how we would draw the line regarding subsection (10), “in home health care services and in other community-based services in which there is an elevated potential for occupational exposure to SRIP.” A. Duran asked if outreach services would include motor vehicles or meals on wheels. B. Nakamura responded that most volunteers are not covered by Cal/OSHA. He said that the determining factor is whether there is increased risk for occupational exposure.

Exposure Control Plan – subsection (c)

B. Nakamura introduced the discussion of the exposure control plan. He said this section is structured like the bloodborne pathogens exposure control plan. It sets up procedures for determining which workers are exposed, and for controlling those exposures. Subsection (6), (7), and (8) set up requirements for a system of communication with employees, and between employers and the local public health authority. The procedures need to be tested and verified. A. Flood asked what was meant by an effective procedure to communicate with other employers. She said that as a hospital-based person, she has had difficulty trying to communicate with ambulance companies. She said it took her 3-4 tries “just to get a warm body to accept the phone call.” Effective communication is difficult to achieve. They can have referrals from as far away as Las Vegas. Teresa Zaroda said that the only way they communicated with the ambulance personnel was when they came back for another run, and they asked what had happened with that patient. A. Flood said it is easy to contact the local health officials. They also can contact the employee health nurse or director of nursing at a nursing home. B. Nakamura said that this requirement applies to both sides, so the ambulance companies or nursing homes have to develop procedures for communicating with the hospitals. A. Flood asked what would happen if a Cal/OSHA inspector came on site, and found they had tried, but with

no success. B. Nakamura said that in that case, the inspector could follow up with the other employer and see where the problem was.

V. Wells asked, regarding subsection (7), requiring an effective procedure for communicating with the local health officer regarding an exposure incident, whether the health officer to contact was where the employee lives or works. For TB, it's where the employee lives, not where he or she works. K. Moser said that TB controllers are aware of this issue, and have jurisdictional guidelines to try to call each other in situations like this. Jessica Barcelona asked, regarding subsection (6), what an effective system is, within a facility. It is hard for her to find this requirement, in looking at the sections on compliance and work practices. Susan Evans suggested looking at established systems of communication about tuberculosis, in which she has great confidence. K. Moser said that the TB controllers don't have all-inclusive guidelines. They are trying to work on communications in their own areas. Pamela Persaud said that she is concerned regarding the term "effective." She called the county health officer about legionella, and they didn't care. She has documented the call, and asked if that would be sufficient. B. Nakamura said that the employer has to get their part right, and document it. Nancy Parris said that "effective" is a judgmental term, and maybe another term would be better. She said, regarding subsection (6), that it was too broad, it should be limited to workers included in the standard.

Methods of compliance – subsection (d)

D. Gold introduced the discussion of methods of compliance. She explained that based on earlier meetings, the draft includes some broad precautions to be taken with everyone who has certain symptoms, like asking people to cover their coughs. Then, if a patient meets the CDC definition of a suspect case, requiring airborne infection isolation, additional precautions are taken. The timeframe for transfer to an airborne infection isolation room was lengthened in this draft for off-site transfers, based on feedback from participants at previous meetings.

J. Barcellona asked, regarding subsection (d)(3), who is responsible to inform the patient of the source control measures. Who will reinforce the message? It should not be completely left to front-line employees who are already under a lot of pressure. Is there a reinforcing system that can be more specifically required? We should clarify the reference to subsection (c). E. Eck suggested inserting vaccine into (d)(1) as a method of compliance. Vaccine is a control measure, there are a number of diseases where vaccine prevents an exposure incident because the employee is immune. M. Jackson said the reference to vaccine should be as recommended by the CDC. D. Gold explained that the standard as a whole addressed various types of control measures, and that this section specifically addressed engineering and administrative control measures and personal protective equipment. E. Eck said it would be good to frame the vaccine as a control measure, because it would reinforce the importance of immunizations, but it is okay not to do it here.

P. Lewin said that in regards to the requirement to check ventilation systems in airborne infection isolation rooms every 6 months in subsection (8)(C), the interval should be every year. Their systems are checked annually by engineering and that is sufficient, given that there is a daily check with smoke tubes when the room is in use. Grace Hradecky agreed that annual is sufficient, in conjunction with the daily tests. Six months is too frequent. A participant said that this issue had been discussed at a previous meeting as well.

M. Mendelsohn asked if alarms would meet the requirement of (8)(B) for a daily demonstration of negative pressure, when the room is occupied. M. Jackson said that there are concerns about the failure rate of alarms, including that they sometimes get turned off. The CDC is addressing this issue in the new draft of the TB guidelines. She asked about the required ventilation rate in subsection (8)(A). She said that the usual way to state this is 6-12 air changes per hour, or six for existing, 12 for new construction. She suggested checking with OSHPD [Office of Statewide Health Planning and Development]. V. Wells said that some negative pressure rooms have a magnehelic gauge, which should substitute for a smoke test. M. Jackson suggested referring to the CDC. V. Wells suggested that access to the gauges can be locked

T. Zaroda asked regarding the times for transferring a patient to an airborne infection isolation room, in subsection (d)(6), whether the within-facility time would apply if the facility had AII rooms, but they were already occupied, so they needed to move the patient out of the facility. She asked if this language needed to be clarified. D. Gold said that the intent is that the between facility transfer requirements would apply to patients being transferred out of a facility. Chester Choi asked whether this would apply if the patient is not medically stable enough to transfer. D. Gold asked him to e-mail suggested language to address that issue, and he said he would. Lilly Kaneshige asked, regarding subsection (d)(8)(A), whether HEPA units could be used to meet these requirements?

In regards to subsection (d)(10) requiring decontamination facilities for vehicles, Enid Eck said that the standard should require decontamination procedures, not facilities. Chester Choi asked if this would apply to taxis. D. Gold responded that taxis generally would not fit within the definition of occupational exposure. She said they might be covered if the taxis were part of an emergency response plan, and were transporting patients to and from facilities. Grace Hradecky said the term decontamination facilities should be replaced with appropriate engineering controls.

Laboratories – subsection (e)

D. Gold introduced the discussion of the laboratory section. She noted that this section was drafted after the special meeting regarding laboratories. The general approach is to use a biosafety plan, since exposures in laboratories are different because there is no direct exposure to patients. This section does not apply to areas where samples are taken, such as phlebotomy drawing stations. It applies to areas where laboratory operations, such as manipulating cultures, create the possibility of pathogens becoming airborne. It

also includes organisms, such as brucella, which can be an airborne hazard in laboratories, although they are not contracted that way outside of the laboratory. There is potentially more control in a laboratory setting, and there are fewer patient interaction issues. The current BMBL [Biosafety in Microbiological and Biomedical Laboratories, published by the CDC] is referenced in the draft, but the BMBL is being reviewed and expected to be revised soon, so the specific reference may change.

V. Wells said that she is concerned that the definition of laboratories may be too inclusive. There should be an exception for basic diagnostic work done in health care clinics that does not involve aerosols. R. Enriquez said that the organisms should be capable of transmitting disease, BSL2. Richard Weier said that the exposure risk in laboratories is not the same as a clinical setting. There are risks to lab employees through cultures etc. that are not covered. A specimen that is not aerosolized is a low risk, centrifuging is a higher risk. Exposure incident should be specifically defined for labs.

D. Gold noted that subsection (e)(1) refers to exposure without control measures present. If something is done in a biosafety cabinet it would not necessarily be an exposure incident whereas the same occurrence on a lab bench would be. R. Weier responded that if a specimen is spilled, you find out later when they get the disease that exposure occurred; it is almost always after the fact. D. Gold responded that for an occurrence like that, you want the people who were exposed to the spill to be provided with the appropriate medical follow-up. R. Weier said that the requirements can be taken too far, for example, AFB staining should not be covered but culturing would. D. Gold asked if the BMBL provides a reasonable basis. She said that this proposal relies on the current BMBL, but since it contains outdated language and approaches, such as the prohibition of pregnant women from controlled areas, or storing employees' serum in case of an exposure, the current BMBL cannot be referenced in entirety. The biosafety plan is intended to plan for different types of employee exposure, and identify and prohibit risky practices such as sniffing.

Respiratory Protection

D. Gold introduced the discussion of respiratory protection. She explained that this draft has some changes from the previous draft including a requirement for powered air purifying respirators (PAPRs) under some circumstances. An exception is provided, if the employer documents the basis for the decision. She noted that PAPRs have been obtained by many facilities for their first receivers. She noted that the draft incorrectly mentioned N,P, and R filters for PAPRs. High efficiency filters for PAPRs are still called HEPA filters. The PAPR provides a higher level of protection than the N95 filtering facepiece respirator, and it is specified in the federal OSHA document for first receivers. Under this proposal, the employer could document that a PAPR is not feasible, and could utilize other respirators so long as they provided at least as high a level of protection as those recommended by the CDC. The CDC has suggested that a higher level may be needed for high risk procedures for SARS. If they made an official statement to that effect, that would be the base protection level.

P. Lewin said that in theory PAPRs are good, but in practice it is hard to get people to use them. They can't get their chief pulmonologist to agree to use even a mask. V. Wells said there is also a question of cost-effectiveness. The N95 is adequate under the CDC guidelines, so why should the employer be required to provide a PAPR simply because an employee requests it. What about when a clinician says it impairs their ability to clinically treat or evaluate a patient. She is more comfortable in requiring PAPRs for high risk procedures. In terms of requiring them for first responders, the question is what are they receiving. The protection should be appropriate for the event. A. Flood said that in bronchoscopy, if four people are wearing PAPRs it's hard to communicate, due to the noise. The hood may obscure vision. There's no demonstrated risk associated with using N95's. K. Moser said the draft doesn't provide enough of an out, in saying that a PAPR must be used unless it's not "practicable." It's always practicable, it's hard to do. It has been demonstrated that the N95 is enough to avoid TB conversions. A. Duran said that all of the examples are in controlled environments. Firefighters and paramedics can't use a PAPR. Sally Peerbolt said that there is a medical standard for people who work in jails, and if their PFTs [pulmonary function tests] show abnormalities, they can't do the job, so there isn't a need for providing a PAPR due to the physician's recommendations. C. Lohrstorfer said that he has been working in hospital occupational safety and health since 1978. He remembers the problem of people requesting nitrile gloves just for personal preference, and how much that cost. It would be cost-prohibitive to allow an employee to get a PAPR just because they request it. E. Eck said that she agreed that the standard should not mandate PAPRs. She suggested including language such as consideration shall be given to the provision of PAPRs for certain purposes. Many PAPRs and even some cartridge respirators obstruct the visual field, and therefore increase the risk for sharps injuries. You wouldn't want to trade one risk for another. There are also considerations about communication, and also patient anxiety, in seeing people in hoods. Saying that consideration should be given provides more flexibility for employers without jeopardizing safety. D. Gold explained that there are different styles of PAPRs, including ones with a clear faceshield. She said that, as mentioned at other meetings, some medical facilities, including Johns Hopkins, are using PAPRs throughout the hospital, including for bronchoscopy.

Jessica Barcelona said that in paragraph (f)(1) the term "bloodborne" should be "airborne." She suggested looking at the language used in the bloodborne pathogens standard regarding sharps safety. Early discussions about provisions of the bloodborne pathogen standard, such as safety needles, also expressed concerns about compromising patient care, but many of the principles were adopted in the end without causing a significant problem. It's important for employees to have the option to use PAPRs. N. Parris said that they had evaluated replacing the N95 with PAPRs. Employees rejected them. The batteries required an odd recharge cycle. If each has their own hood, there's a storage issue. You need enough hoods to accommodate everyone, and disinfection procedures if they are shared. It also sets up two standards, it implies that the N95 isn't good enough, and contributes to overall paranoia. D. Gold responded that in the draft, the PAPR is specified for high hazard procedures, such as bronchoscopy, it wouldn't be required throughout the hospital. A. Duran said that raises their concerns again about the

definition of an exposure incident and how extensively PAPRs would have to be issued. V. Wells said that we need clarification from infection control regarding disinfection procedures. T. Zaroda said that we need to do a financial analysis. PAPRs would cost millions of dollars to implement. Johns Hopkins has deep pockets. LA County doesn't have the money. D. Gold responded that the Johns Hopkins group had analyzed the cost of PAPRs versus N95 or other respirators, and determined that they were quite cost-effective, in part because they do not require annual fit-testing. She noted that at previous meetings several participants had advocated for the use of a higher level of protection than the N95 respirator, and the intent of including this provision in the draft was to have a discussion about the PAPR.

Fit-Testing

D. Gold explained that the approach in the previous draft to permit employers to fit-test people every other year if they did a face to face assessment and user seal check, was contradicted by a recent paper, which is available at this meeting as a handout. [J.L. Derricka, Y.F. Chana, C.D. Gomersalla, S.F. Luib. Predictive value of the user seal check in determining half-face respirator fit. *Journal of Hospital Infection* (2005) 59, 152–155.] This draft tries to relieve some of the burden of annual fit-testing by addressing the number of employees who are included. Specifically, it addresses a comment that people have made in previous meetings, that they need to fit-test a large number of people so that they will be available in case of an emergency. This draft allows for people who have been fit-tested within the previous two years to use a respirator in the event of a “surge” condition, so long as they are fit-tested within seven days. She asked whether this would be helpful to people in structuring their programs.

P. Lewin said that it might not decrease the number of people who need annual fit-tests. They have tried to do a core group of personnel, but then they feel unfairly picked on. It's hard to split the job categories. S. Peerbolt said that they have a lot of employee float. Employees may never go into isolation rooms, but there are isolation rooms on every floor, to use as overflow. Therefore all surgical nurses must be fit-tested. They don't have any expectations of surge, they just need to be able to do float. They currently fit-test annually, with the PPD tests. 800-1100 are done each year. They spend hundreds of hours fit-testing. Only the neo-natal intensive care isn't included. Grace Hradecky said it doesn't help corrections. Some nurses may never take care of TB patients. They don't fit-test all deputies for TB respirators. They have been trying to get people fit-tested for full-facepiece respirators.

V. Wells said that the two-year interval would be helpful for dealing with their public health personnel. These employees do not regularly use respirators, but would be called upon in the event of an emergency. It would be helpful for them, in that they could be ready. It wouldn't be helpful in the hospital, but it would be helpful in primary care. T. Zaroda said that she didn't see the point in annual fit-testing. The respirator is a fixed entity, and unless the person who wears it changes, why would you expect a change in the fit? Harold Shumate said that they had said the same thing at the last meeting. D. Gold explained that there is a requirement that Cal/OSHA be as protective as federal

OSHA, and therefore without justification, we can not change the annual fit-test requirement. She explained that there is significant error in fit-tests, particularly qualitative fit-tests. Not all facial changes are apparent, such as dental work. N95 filtering facepiece respirators are adjustable, and the actual shape is made each time a new one is put on. They do not automatically make the same seal when donned. The Federal concept is that with repetition of testing and fitting, the fit is improved. OSHA determined that annual fit-testing is necessary, and for California to deviate from that, we have to justify it in terms of equivalent employee protection.

V. Wells asked if a facility did quantitative fit-testing every two years, could you argue that would be as effective. Hopefully, that would reduce errors. D. Gold replied that while it might reduce errors, it wouldn't account for facial changes over the increased time period. V. Wells asked if there is any data on how many people change fit in a year? D. Gold said that is a good question, and that we have asked at previous meetings for employers to review their annual data over the previous years, and provide that data to Cal/OSHA. It would be very helpful in addressing the issue of equivalency. V. Wells said that they keep fit-test data, but the problem is getting to it, since it is kept in each individual employee's file. P. Persaud said that they should have data. She said that if a person is required to wear a respirator in their job description, they must be fit-tested. Employees have to come in for TB testing, so it has worked out. J. Barcelona said that it's about narrowing the world of who we're testing. If you fit-test those who are expected to have to use a respirator, and identify those who are reasonably expected to use a respirator and fit-test them, then the exception for surge is probably the best compromise we've seen yet. A. Flood asked why there would be two types of users. D. Gold replied that a typical hospital may have a large number of nurses and other staff who do not have the exposures or conduct specific procedures that need a respirator, but who are defined as respirator users. Some programs identify every nurse as a respirator user which makes them subject to the annual fit-test requirements. But many of them do not use a respirator at all in the normal course of their work, and the hospital is fit-testing them because they want to be ready in case of an outbreak, whether it's pandemic flu, or some other surge situation. In terms of equivalence Cal/OSHA can probably deal with the surge concept, in allowing employers to provide annual training and an initial fit-test for respirator selection to employees, who would only use respirators when there is some sort of surge. The intention is to avoid having employers not doing anything to prepare for the situation and then being forced to provide no a respirator with no training and no fit-test when an event occurs. This surge approach is an attempt to narrow the amount of annual fit-testing by more clearly defining who it applies to.

P. Persaud said that they found a lot of respirators on spill carts that no one could use. In the first receiver group, they have homeland security PAPRs. They can fit-test others as needed. In terms of floaters, if the department that needs personnel requires respirators, they can bring respirator users in as replacements from other units, and then staff those vacancies with floaters. N. Parris asked whether, for registry personnel, if a respirator card could be allowed. Can an employer accept another employer's fit-test? The draft would be better if the definition of surge were modified. They started with fit-testing everyone, and looked seriously to narrow it to a small group, but it still ended up as a big

list. At a lot of facilities do not have many TB patients. They looked at whether an employee used a respirator in the last year. There's no reason to believe there is a difference in safety between fit-testing every year versus a longer interval. E. Eck said that surge shouldn't be looked at as only those people who are put in PAPRs. Surge is already chaos. People need to be able to do the immediate tasks. The idea of making an allowance for surge is good. Isolation rooms are on med-surg floors. It would help if people were screened by whether they had to wear a respirator in the previous year. All employees would have an initial fit-test. Then the standard could set an outside limit for a fit-test interval of 2 or 3 years. We aren't seeing conversions among people wearing respirators. J. Barcellona said that it is up to the individual employer to determine who falls into a category. It is likely that a disaster condition would last more than a week, and there needs to be a point in time when a current fit-test is required. There needs to be adequate time to provide a proper fit-test.

M. Jackson said that she likes the approach of asking if people have used a respirator in the past year. When people do the annual medical, it's reasonable to ask if they wore a respirator in the past year. It would give the program administrator a better idea of who to include. There's no need to fit-test if you don't wear it. Lilly Kaneshige said that there is a problem with categorizing people based on past respirator use. How do you justify if you've taken someone out of the annual fit-test category, if in the next week, they need to use one? But the response may enable you to put them into the surge group. E. Eck agreed. N. Parris said this is similar to the annual stool test for dietary. You've been fit-tested at baseline, there's no reason to believe it's different. People should be refit-tested based on their responses about facial changes etc. You're already going for a full year on one fit-test.

K. Moser said that if a person only uses a respirator once in three years, why fit test them annually. There is no time to fit-test in a surge situation. V. Wells said that under the draft they would have at least had a baseline. K. Moser said that if than can use it for 7 days in surge, she would pick a longer period. A participant said they feel that more days should be allowed. There could be problems if someone could not be fitted with the respirators on hand. P. Persaud noted that a person who uses the respirator daily won't forget how to put it on, but the others, who are not regular respirator users, will forget.

A. Flood said that you should ask whether a person has worn a respirator in the past year. You can use that answer to refine who is included in the program. E. Eck said that she agreed that anyone coming in the door is not at risk. A. Flood added that the annual review for the control plan could identify the people that need to be included. P. Lewin said that the records could include a baseline and an annual questionnaire which would include how many times the employee wore a respirator. V. Wells said that the standard should not specify what questions employers should ask in determining who uses a respirator. M. Jackson suggested having two separate records, one for fit testing and a separate questionnaire. V. Wells asked if Federal OSHA has data on fit-testing over consecutive years. D. Gold responded that at least in the Federal OSHA docket for the respiratory protection standard there was not much longitudinal data. Those documents are now available on the advisory committee's webpage. There are a number of papers on

the fit of N95 respirators that have been written by NIOSH researchers starting when N95 filtering facepiece respirators were first certified. V. Wells said that she thought the requirement to use respirators was for protection against diseases requiring airborne infection isolation.

Alternate medical questionnaire

D. Gold explained that there has been a plan to develop an alternate medical questionnaire to be an appendix to this standard, but that there has not been much input received from participants. The idea was to develop a questionnaire that would be tailored to this type of respirator use, as compared to the current mandatory content, which is included in Appendix C to Section 5144. Specifically, we need input from physicians about the criteria they would use for evaluating respirator use, and the basis for distinguishing this respirator use from general industry. There are also some research areas that may be relevant to this process regarding the physiological burden of the N95 qualitative and quantitative testing procedures. Some research shows an elevated level of CO₂ in the user's system of 3-4%. She asked that people, particularly occupational health physicians, provide specific feedback on the questionnaire, and on how the use of filtering facepiece respirators in infection control differs from respirator use in general industry in terms of the physiological burden on employees.

Medical Surveillance – Subsection (g)

P. Lewin said that she wanted to require a declination for flu vaccine. It makes people think about it, it's an extra step people have to take if they decide not to get the vaccine. V. Wells said that the declination helps to get people to take the vaccine, but it is a big record-keeping burden, because it happens every year. It isn't so bad to keep records for vaccinations that are given one time. P. Lewin said that employers are required to keep vaccination records. V. Wells said that identifying those who don't get it takes a lot of work. L. Kaneshige said that it could be done in accordance with the annual training. V. Wells said that the annual training is scheduled throughout the year, but the flu shots take place in a short period. E. Eck said that it would help in getting people to take the vaccine if they were required to decline, but the record-keeping is a bear. The declination has helped a lot with hepatitis B vaccine.

E. Prendez said that if an employee gets the vaccine at another provider, then requiring a declination would require the employer to follow-up. E. Eck said that the employee could decline the vaccine and say that he or she got it somewhere else. M. Jackson said that it depends what vaccine you're talking about. An employee won't get hired if they don't take the mumps, measles and rubella (MMR) vaccine. We don't want people to get BCG. D. Gold said that the draft requires vaccination as recommended by the CDC, which doesn't include BCG. V. Wells said that she supports vaccinating everyone for what they need to be vaccinated for. But who is at increased risk for MMR. Paramedics and people in health care are at risk, but what about vaccinating sheriffs against varicella or police for rubella. It may not make a difference. E. Eck said that all of those diseases in adults

are really serious. There's less exposure to sheriffs. The employer is required to provide vaccine to employees who are not immune. If they are immune there's no reason to provide vaccine. V. Wells asked about sheriffs who work in jails and first responders S. Robles asked where the employer's obligation would end – would it include social service workers?

K. Moser suggested adding to the notification requirement to the local health officer in subsection (g)(5) a provision to require communication regarding recommended follow-up procedures. The local health officer can discuss it with the health care provider. V. Wells said this section should clarify which local health officer to notify, the public health officer where the workplace is located, or the public health officer for the employee's home.

Medical Removal

V. Wells said that it is appropriate to require medical removal protection for a situation that workers compensation doesn't cover, which is the period when employees have been exposed, but are not sick. It is not appropriate to go beyond that, to a period covered by workers comp. We should look only at that period where a person is excluded because they may be infectious. If they become ill, they should be transitioned to workers comp. S. Robles said this is additionally complicated because fire and sheriffs get 4850 compensation [Compensation for work related disability under the California Labor Code Section 4850]. Current law requires an employer to spend up to \$10,000 to determine whether a case is covered under workers compensation, so that could be used to cover exposure situations. V. Wells said that money is only paid for medical evaluation, not lost wages. S. Robles said that this provision would cause a lot of problems for loss prevention, because employees who were off work for different reasons would get different compensation. E. Eck asked what we were trying to do with this section. B. Nakamura said we are trying to cover those cases where an employee is removed for infection control purposes, and also where they are removed because they can't use a respirator. E. Eck said that there doesn't need to be an 18 month period then. V. Wells said that employees have protection under the ADA (Americans with Disabilities Act) if they can't use a respirator, so that doesn't need to be in this standard. G. Hradecky suggested leaving out the whole subsection. V. Wells said that there is a need for it for limited periods, for example there's a two week period for varicella. A. Flood asked if this would apply to an employee who had TB. V. Wells said you need medical removal when the person is not sick. E. Eck said that when they gave smallpox vaccine they had policies that the person had to take off.

D. Gold asked if people were saying that this standard should only require compensation for the period where a worker may be infectious but is not sick. A. Flood said that employees should use workers compensation, the same as for any other work-related illness. M. Jackson said that in this case, an employee is being removed for the benefit of other employees and patients. V. Wells said that a person shouldn't have to lose their salary because they take off work for other people's good.

Communications

D. Gold reviewed the communications problems that have been reported during previous advisory meetings. They include:

- 1) Patients being sent to another department within a facility without an indication of the patient having TB or being a suspect TB case
- 2) Paramedics and EMTs not being told that the person they transferred had TB or another SRID.
- 3) Home health care workers not knowing that the patient or an inhabitant is infectious
- 4) Police sent to disturbances or other situations are not told about possible health issues
- 5) Interactions with an infectious person often don't get back to the exposed employee, or that agency.

D. Gold said that people at these meetings have said that HIPAA [The Health Insurance Portability and Accountability Act of 1996] is often cited as the reason for not communicating this information. A. Flood said that HIPAA allows disclosure of medical information which is necessary for the continuity of care for the patient. Such disclosures must be logged. They use the fax to communicate and file the fax. They use this system to communicate with the local health department, and providers within the system. T. Zaroda said that their HIPAA compliance person was happy with that system. But from a public health point of view, people tend not to read the information they've been faxed, so they often call as well. A. Flood said that system works for stuff that crosses their desk. But for a person who is discharged from the ED, they may not see the sputum, and there is a problem tracing exposures through to the hospital. E. Eck said that they've had problems notifying ambulance services and paramedics. It's hard to reach anyone there, and it's hard to know if anything was done to notify their employees. We need a requirement for two-way communication. A few years ago, the Health and Safety Code, the Department of Health Services and the Ryan White Act all told them to do different things regarding bloodborne pathogens exposures. They tried to work out something with the ambulance companies. M. Jackson asked what we could do different here. G. Hradecky suggested keeping it easy. T. Zaroda said that everyone is busy. Other agencies should be responsible to read the fax. It is the hospital's job to supply the information that there was an exposure. There should be one form. B. Nakamura said he doubted that Cal/OSHA could mandate a form in this situation because of other agencies' legal authority. A. Flood asked if it was acceptable to say that a phone call was made. It could be kept in a log. Everyone in this room is willing to comply, but people outside of this room are beyond our control. E. Eck said that she had called ambulance companies to notify them, but she had no confidence that the information got to the ambulance driver. P. Lewin said that there was also a problem for registry and traveling nurses, because they were no longer working in the hospital by the time a case was identified. A. Flood said that registry workers could be in the hospital today, and in New York next week.

M. Jackson said that the reason we care about communication is the exposed ambulance driver, to provide for early intervention. Sometimes an ambulance driver would come back and ask about a patient, and they couldn't tell them. They had to tell their employer. She's not sure there's any way to do this effectively. V. Wells said that if the health care

facility had to keep a log, Cal/OSHA could inspect, and go to the other employer. J. Barcellona said that even within a facility, HIPAA is used as a reason not to inform employees. We need to clarify the communications requirements, so that the employer's obligation is clear. A. Flood said that there's a way to tell employees about an exposure incident. You don't have to provide the patient's name in the formal communications with employees. You can just say that there was a patient on the 7th floor on a certain day. E. Eck said that there's a problem in communication between units. For example, a patient may be initially seen in the emergency department and then sent to the ICU. The ED doesn't tell the ICU about the suspected infectious disease. A. Flood said that communication is permitted by the continuity of care provisions – at least on airborne precautions. T. Zaroda said that if a patient is identified as meningitis or TB, then the instruction for airborne precautions goes with them, and they need to be placed accordingly. They have a rich access algorithm in their admitting department. J. Barcellona said that a patient may be transferred from the ED to the ICU with no information that they are rule-out TB, until they are confirmed. A. Flood said that if the patient is r/o TB they should have been placed in airborne precautions. T. Zaroda said that training of employees in these procedures needs to start at new employee orientation.

A. Flood said that one of the problems in tracing exposures is that with TB, people don't feel sick. M. Jackson said that there is a lot of variation by disease. A well-organized screening program may be more effective than trying to figure out a given case. Skin or blood tests are a better way to monitor employees than exposure tracking. It's often hard to find a source. We should emphasize on-going monitoring and immunizations for vaccine-preventable diseases. Part of it is defining whose job it is to do the work. If it's TB, then those people are doing the follow-up. In the context of first responders, it's part of the process. If the patient is put in airborne isolation right away, who's responsible to communicate back to the EMT. V. Wells said that the ambulance data is there, whether it's used or not. But if someone walks into a doctor's office, and they refer the patient to a hospital, will the hospital get back to the doctor? P. Persaud said she had that happen – a doctor referred a patient to the hospital, the patient went into a pediatric ward. They then had to look at 100 people for follow up. He went by ambulance. V. Wells said that they see patients referred to a hospital for one thing, but then they find something else. P. Persaud said that a nurse showed up at her facility, who tested positive for TB. E. Eck said that is not unusual, and when they have a new employee who tests positive for TB they do a chest X-Ray.

Breakout Groups

The original agenda had planned to include separate discussions for three breakout groups. To the extent that people were present from those groups, the concerns had been included in the general discussion, so the separate discussions were not held.

Next Steps

D. Gold and R. Nakamura will circulate a list of diseases and precautions (hopefully obtained from M. Jackson). The next meeting will take place before the end of the year. People are encouraged to send specific comments on the draft standard.