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San Mateo County Health Department's Protocol for Communicable Disease Response at San Francisco International Airport

Issue

Are San Mateo County Health Department's current procedures adequate for surveillance and quarantine of arriving international travelers who may have been exposed to infectious diseases as specified by the U.S. Public Health Service?

Background

San Francisco International Airport (SFO) is owned and operated by the City and County of San Francisco. Approximately 11,000 international travelers arrive daily at San Francisco International Airport. SFO is located in San Mateo County (the County). Therefore, the San Mateo County Health Department (SMC Health) is responsible for public health issues related to domestic flights, passengers in the terminals, and international travelers once they leave the Federal Inspection Service area, commonly referred to as the customs area.

The Centers for Disease Control and Prevention, Division of Global Migration and Quarantine (CDC-DGMQ) is responsible for preventing the introduction, transmission, and spread of communicable diseases from foreign countries into the United States and from one state or U. S. possession into another until international passengers leave the customs area.¹

The Centers for Disease Control and Prevention San Francisco Quarantine Station (CDC-QS) has four full-time staff members to inspect humans, animals, and animal products throughout their jurisdiction.² The CDC-QS provides some training on communicable diseases to U.S. Customs and Border Protection to help them respond to infected travelers arriving on international flights. The CDC-QS staffing limitations and scope of their responsibilities requires that SMC Health work very closely with the CDC-QS to prevent dangerous communicable diseases from entering the County.

¹ Title 42 United States Code Section 264.

² U.S. Quarantine Fact Sheet 2007 (www.cdc.gov).

Certain diseases that have potential for epidemic transmission have been specified in the U.S. Public Health Service Act Section 361(b) for isolation or quarantine. These notifiable diseases include cholera, plague, SARS, and pandemic influenza. The U.S. Department of Transportation, National Aviation Resource Manual for Quarantinable Diseases defines “isolation” and “quarantine” as follows:

- *Isolation is the separation of persons who are ill from those who are healthy, and restriction of their movement to stop the spread of that illness.*
- *Quarantine is the separation and restriction of movement of persons who are not ill but have been exposed to an infectious agent and therefore may become infectious.*³

Airlines may refuse to board any obviously sick passengers at the embarkation point. Airline staff are trained and provided with fact sheets to help them identify passengers with specific diseases. If sick passengers are boarded, CDC-DGMQ guidelines recommend flight crews to provide a surgical mask to any passenger with a contagious disease and, if possible, to separate him or her from other passengers. Pilots, by law, must notify the nearest quarantine station of the presence of the infected passenger. CDC-DGMQ staff will arrange for medical assistance, notify appropriate local health departments, and work with the airline to make sure the airplanes are disinfected. Airlines distribute a CDC-DGMQ machine-readable passenger locator card to passengers coming from parts of the world where notifiable disease is endemic so that passengers can be contacted if they have been exposed to such a disease.

Automatic passenger temperature measuring devices have proven useful for detecting sick passengers at other international airports. SFO does not have such devices.

The CDC-QS informs SMC Health of the arrival of a passenger with a suspected notifiable disease. SMC Health has one dedicated staff member who devotes ten percent of his or her time to SFO health matters. The role of SMC Health is basically passive surveillance, with suspected illnesses reported by airport staff. Surveillance is defined as... *the collation, analysis, and dissemination of data. It is the understanding of the current conditions present in a community.... Adequate surveillance can enable the County to take proactive steps.*⁴

Catholic Healthcare West (CHW) operates a clinic at SFO under contract with the City and County of San Francisco. The clinic provides on-site medical services for passengers with medical issues and to those passengers referred to them by the CDC-QS. The CDC-QS and the clinic staff together assess and address any disease transmission threats.

The SFO medical clinic, operated by CHW, closes at 7:00 p.m. Passengers requiring medical assistance when the clinic is closed are referred to local hospitals. The City and

³ U. S. Department of Transportation. National Aviation Resource Manual for Quarantinable Diseases. 2007. p. 4.

⁴ SMCHD, Pandemic Flu Preparedness and Response Plan Executive Summary May, 2006.

County of San Francisco Fire Department has trained paramedics available at SFO at all times, and the San Mateo County Public Health Officer and staff are available by telephone.

Investigation

The 2007-2008 San Mateo County Civil Grand Jury (Grand Jury):

- Conducted an on-site interview with senior medical staff from SMC Health.
- Conducted follow-up telephone interviews with SMC Health staff that expanded or clarified issues raised during the on-site interview. (Reference materials, supplied by the responsible staff member and used for this report are appended.)
- Conducted a telephone interview with a senior staff member of the Regional San Francisco CDC Quarantine Station (SF-QS) to obtain further information about procedures and resources.
- Reviewed published and on-line materials, which are referenced in this report.

Findings

The Grand Jury found that:

- Ten percent of one SMC Health staff member's time is assigned to SFO surveillance duties.
- SMC Health staff are active in the prevention and spread of communicable diseases at SFO despite limited staff hours and resources.
- Interaction between the SMC Health and the CDC-QS is excellent. There is daily contact between the two, especially between 2:00 and 4:00 p.m., when most international flights arrive.
- Senior SMC Health officers estimate that two additional permanent full-time SMC Health employees would be needed to update preparedness activities (planning, preparing equipment, and training) and the ongoing coordination of daily surveillance and routine response activities.
- For a sustained health emergency response, senior SMC Health officers estimate two full-time employees would be required for two years to develop training and protocols.
- Currently, SMC Health has no formally adopted plans for sheltering and monitoring a large number of infected passengers arriving simultaneously.

Conclusions

- The current practices and procedures are adequate for surveillance and quarantine in the current condition when there are few situations which warrant action.
- The current practices and procedures, however, are not adequate under conditions that would require many travelers to be diagnosed and quarantined.
- Further training is needed in complex public health response for airline, airport, police, customs and border patrol personnel.
- Ten percent of one SMC Health staff member's time is insufficient to support collaborative efforts among its staff and airport-based emergency responders, airport staff, and the CDC-DGMQ.
- Multi-agency planning is needed to provide shelter for medical surveillance of hundreds of quarantined passengers in an emergency.

Recommendations

The Grand Jury recommends that the Board of Supervisors:

1. Undertake a study to determine staff, facility, and equipment requirements necessary to accommodate a large scale health emergency that may occur at the San Francisco International Airport.
2. Explore opportunities to work in conjunction with the Federal Centers for Disease Control and Prevention Division of Global Migration and Quarantine, State of California, and the City and County of San Francisco to meet whatever requirements are defined by the study in recommendation 1.

Appendix: Resources used for this report

1. Department of Transportation. National Aviation Resource Manual for Quarantinable Diseases. 2007
2. U.S. Quarantine Stations Fact Sheet. 2007
3. CRS Report for Congress. Extensively Drug Resistant Tuberculosis: Emerging Public Health Threats and Quarantine and Isolation. August 28, 2007
4. Committee on Homeland Security. The 2007 XDR-TB Incident: A Breakdown at the Intersection of Homeland Security and Public Health. September 2007
5. Mangili A, Gendreau. Transmission of infectious diseases during commercial air travel. Lancet 2005
6. San Mateo County Health Department. Pandemic Flu Preparedness and Response Plan. May, 2006
7. <http://www.cdc.gov/travel> and <http://www.smhealth.org>
8. Electronic communication from senior officer, SFO CDC-QS



COUNTY OF SAN MATEO
Inter-Departmental Correspondence

County Manager's Office

DATE: April 30, 2008
BOARD MEETING DATE: May 20, 2008
SPECIAL NOTICE: None
VOTE REQUIRED: None

TO: Honorable Board of Supervisors
FROM: John L. Maltbie, County Manager
SUBJECT: 2007-08 Grand Jury Response

Recommendation

Accept this report containing the County's responses to the following 2007-08 Grand Jury report: San Mateo County Health Department's Protocol for Communicable Disease Response at San Francisco International.

VISION ALIGNMENT:

Commitment: Responsive, effective and collaborative government.

Goal 20: Government decisions are based on careful consideration of future impact, rather than temporary relief or immediate gain.

This activity contributes to the goal by ensuring that all Grand Jury findings and recommendations are thoroughly reviewed by the appropriate County departments and that, when appropriate, process improvements are made to improve the quality and efficiency of services provided to the public and other agencies.

Discussion

The County is mandated to respond to the Grand Jury within 90 days from the date that reports are filed with the County Clerk and Elected Officials are mandated to respond within 60 days. To that end, attached is the County's response to the Grand Jury report on San Mateo County Health Department's Protocol for Communicable Disease Response at San Francisco International, issued on February 28, 2008.

San Mateo County Health Department's Protocol for Communicable Disease Response at San Francisco International

Findings:

Staff is in partial agreement with the Grand Jury's findings. While there may be general support of the spirit of the findings, it is necessary for the County to complete the study recommended by the Grand Jury before it is able to express whether there is general agreement with the findings about staffing levels.

Recommendations:

The Board of Supervisors should:

1. Undertake a study to determine staff, facility, and equipment requirements necessary to accommodate a large scale health emergency that may occur at the San Francisco International Airport.

Response: Concur. The Health Department will undertake a study to address the requirements of a large scale health emergency at San Francisco International Airport. It is expected that the outcome of the study, or a status report of the progress made to complete the study's scope, will be available for presentation to the Board of Supervisors at its September 2008 final budget hearing.

2. Explore opportunities to work in conjunction with the Federal Centers for Disease Control and Prevention Division of Global Migration and Quarantine, State of California, and the City and County of San Francisco to meet whatever requirements are defined by the study in recommendation 1.

Response: Concur. The Health Officer and Health Department staff have good working relationships with the health-related and operations-related staff assigned to San Francisco International Airport from the Centers for Disease Control (CDC), the State Department of Public Health, and the City and County of San Francisco. Health Department staff will work with staff from those other jurisdictions in developing the study in recommendation 1.