or breaks in the skin. Hispanic Americans may be more likely to reside in agrarian settings with increased exposure to soil and opportunities for contamination of cuts and other injuries. Whether caused by environmental factors, genetic predisposition, access to medical care, or other socioeconomic factors and pressures, the reasons for the higher incidence of BAE in Hispanic Americans warrant further study.

This study was supported by the Emerging Infections Program of the CDC.

Frederick L. Schuster,*
Carol Glaser,* Somayeh Honarmand,* James H. Maguire,† and Govinda S. Visvesvara†
*California Department of Health Services, Richmond, California, USA; and †Centers for Disease Control and Prevention, Atlanta, Georgia, USA

References
1. Glaser CA, Gilliam S, Schnurr D, Forghani B, Honarmand S, Khetsuriani N, et al. In search of encephalitis etiologies: diagnostic challenges in the California Encephalitis Project, 1998–2000. Clin Infect Dis. 2003;36:731–42.
2. Visvesvara GS, Schuster FL, Martinez AJ. Balamuthia mandrillaris N. G., N. Sp., agent of amebic meningoencephalitis in humans and other animals. J Eukaryot Microbiol. 1993;40:504–14.
3. Schuster FL, Glaser C, Honarmand S, Visvesvara GS. Testing for Balamuthia encephalitis by indirect immunofluorescence. In: Lanes-Villa F, Booton GC, Marciano-Cabral F, editors. Proceedings of the Xth International Meeting on the Biology and Pathogenicity of Free-Living Amoebae; 2003 Oct 5–10; Ciudad Obregón, Mexico: ITSON-DIEP; 2003. p. 173–8.
4. Schuster FL, Dunnebacke TH, Booton GC, Yagi S, Kohlmeier CK, Glaser C, et al. Environmental isolation of Balamuthia mandrillaris associated with a case of amebic encephalitis. J Clin Microbiol. 2003;41:3175–80.
5. Bakardjiev A, Azimi, PH, Ashouri N, Ascher DP, Janner D, Schuster FL, et al. Amebic encephalitis caused by Balamuthia mandrillaris: A report of four cases. Pediatr Infect Dis J. 2003;22:447–52.
6. Deetz TR, Sawyer MH, Billman G, Schuster FL, Visvesvara GS. Successful treatment of Balamuthia amebic encephalitis: presentation of two cases. Clin Infect Dis. 2003;37:1304–12.
7. Noah DL, Drenzek CL, Smith JI, Krebs JW, Orciari L, Shaddock J, et al. Epidemiology of human rabies in the United States, 1980 to 1996. Ann Intern Med. 1998;128:922–30.

Address for correspondence: Frederick L. Schuster, California Department of Health Services, Viral and Rickettsial Disease Laboratory, 850 Marina Bay Parkway, Richmond, CA 94804, USA; fax: 510-307-8599; email: fschuste@dhs.ca.gov

SARS Alert Applicability in Postoutbreak Period

To the Editor: Since its emergence early in 2003, the epidemic of severe acute respiratory syndrome (SARS) has been characterized by its rapid spread among healthcare workers. On August 14, 2003, the World Health Organization (WHO) issued an alert concerning SARS and recommended a staged approach to surveillance (1). Because occupational transmission has been a feature of the SARS outbreak, WHO recommends surveillance for clusters of alert cases among healthcare workers in low-risk areas (i.e., cases not reported, only imported cases reported, or local cases with limited transmission potential reported). A SARS alert is identified when two or more healthcare workers in the same healthcare unit meet the clinical case definition of...
SARS with onset of illness in the same 10-day period.

To determine the value of routinely collecting worker absence data as part of this kind of surveillance and to assess a threshold level of possible alert cases, directors of six major Italian hospitals were asked for the number of cases that fit the alert definition in 2003. (In Italy, the hospital director is a physician who is in charge of nosocomial and occupational infection control.) The facilities involved were three general hospitals, two university hospitals, and one research hospital; each has an infectious and respiratory tract diseases unit. Three of four patients with imported cases of probable SARS observed in Italy during the 2003 epidemic (2) were treated in two of these hospitals.

No hospitals were able to immediately provide the requested data; in all hospitals in Italy, information on sickness certificates is recorded only for administrative purposes, and certificates are not generally used for medical surveillance. The European Union Council Directive 89/391 directs all participating countries to introduce measures to improve worker safety and health and to provide a designated service that will protect workers, prevent occupational risks, including hazards from biological agents, and conduct health surveillance. In the hospital, these activities are coordinated by the hospital director. When a worker has a transmissible disease, the attending physician for the infected patient recommends that the patient stay home from work for the duration of the infectivity period. If the illness is included in the list of notifiable infectious diseases, the case must be reported to the local public health authority so infection control measures can be implemented. However, neither the attending physician nor public health personnel usually supervise home isolation, and adherence to the recommendations relies on the patient.

Sickness certificates are generally provided by the physician and sent by the worker to the hospital administration within 3 days of illness onset. The certificate indicates the prognosis (i.e., recommended number of days absent from work) but does not report the diagnosis because of privacy concerns. In case of hospital admission, the worker can send the hospital certificate (attesting to the duration of the hospital stay), followed by a physician’s certificate for the recommended length of convalescence, if any.

To determine how the sickness certification system in other European Union countries operates and assesses the feasibility of the WHO alert surveillance, we interviewed specialists in infectious diseases or public health in France (seven imported cases of SARS, two in healthcare workers), Spain (one case), and Denmark (no cases) (2) by electronic mail. According to their answers, the situation in those countries is not substantially different from that in Italy.

In view of the increasing concern related to the emergence and reemergence of transmissible diseases, surveillance efforts focused on groups likely to be first affected by the reemergence of SARS have been strongly encouraged (3,4). Possible alternatives similar to the SARS alert system have been proposed, based on healthcare workers’ sickness absenteeism, when other illnesses are concerned. For example, the effectiveness of enforced monitoring of pneumonia in healthcare workers requiring hospitalization should be evaluated in the context of a wider syndromic surveillance strategy (5).

Although the current healthcare worker sickness reporting system cannot be fully representative and generalizable, Italy and several other European Union countries (e.g., France, Spain, and Denmark) do not support initiating the WHO recommendation and do not have the capacity to detect and respond to SARS, should it reemerge. To overcome barriers to early detection of cases and clusters of severe unexplained respiratory infections that might signal the reemergence of SARS, regulatory changes are necessary, and efforts should be made to balance the need for protecting the privacy of persons with the need for an effective surveillance system.

To identify clusters of occupational diseases among healthcare workers and provide prompt response to any alert, an expanded sickness information system should be implemented. For example, an active confidential assessment of diagnosis could be performed in selected circumstances when healthcare workers are absent. We plan to evaluate the feasibility of this kind of surveillance by focusing on workers with absences with longer than a week and on workers with onset of illness in the same 10-day period.

Acknowledgment

This study was performed within Ricerca Finalizzata and Ricerca Corrente Istituti Ricovero e Cura a Carattere Scientifico. I thank all the colleagues who responded to the questionnaire.

Vincenzo Puro*
*Istituto Nazionale per le Malattie Infettive Lazzaro Spallanzani, Rome, Italy

References

1. World Health Organization. Alert, verification and public health management of SARS in the post-outbreak period; 14 August 2003. [cited 2004 Jun 9]. Available from: http://www.who.int/csr/sars/postoutbreak/en/print.html
2. World Health Organization. Summary of probable SARS cases with onset of illness from November 1, 2002, to July 31, 2003 (revised December 31, 2003). [cited 2004 Jun 9]. Available from: http://www.who.int/csr/sars/country/table2003_09_23/en/
3. Pavlin JA, Mostashari F, Kortepeter MG, Hynes NA, Chotani RA, Mikol YB, et al. Innovative surveillance methods for rapid detection of disease outbreaks and bioterrorism: results of an interagency workshop on health indicator surveillance. Am J Public Health. 2003;93:1230–5.
SARS Outbreak in Taiwan

To the Editor: The article by Hsieh et al. analyzed the daily case-report data for severe acute respiratory syndrome (SARS) from May 5 to June 4, 2003, posted on the Web site for the Taiwan Center for Disease Control, to show how this disease had rapidly spread in the 2003 outbreak (1). Hsieh et al. suggested that infection in hospitalized patients who were classified erroneously as suspected SARS case-patients was a major factor in the rapid spread of the disease in hospitals. Slow classification and delayed placement of these patients in negative-pressure isolation rooms contributed to the high percentage (73%) of nosocomial infection in Taiwan (1).

During the outbreak period (stage II), three teams were responsible for classifying SARS cases (2). The team included infectious disease specialists, respiratory specialists, and epidemiologists recruited from major teaching hospitals throughout Taiwan and was organized by the Taiwan Center for Disease Control and the National Health Insurance Bureau. The team met daily and reviewed the clinical data, travel and contact history, and chest radiographic scans of the reported case-patients obtained (by email or fax) from the patients’ attending physicians. The same protocol (Figure) was used by all team members to classify the case-patients as having suspected or probable SARS. All hospitals that treated patients with suspected SARS either had their own committee to classify patients according to World Health Organization guidelines or followed the protocol for classification or reclassification of reported cases by the team members (3).

Although official reclassification might have taken 12.5 days as suggested by Hsieh et al., the conclusion that inadequate isolation of infected patients during this period led to a higher rate of nosocomial transmission cannot be based on the data available to these authors. From the first day that suspected cases were reported to the Taiwan Center for Disease Control, the patients were placed in negative-pressure isolation rooms when available. Suspected case-patients may have been less likely than probable case-patients to be placed in negative-pressure isolation rooms when these were in short supply; however, all other available isolation precautions were used to treat suspected case-patients before they were reclassified. The notion that increased infection transmission occurred despite these isolation precautions is not consistent with the literature suggesting the central role of gloves, gowns, and surgical masks in preventing transmission (4). Thus, the process of reclassification was not associated with the timing of isolation measures shown to have the greatest impact in preventing infection transmission.

The high proportion of patients with nosocomial SARS infection in Taiwan is consistent with the observations of Lingappa et al. (5) and others who have noted that the hospital setting was the primary amplifier of SARS transmission, with significant community transmission occurring in only the largest outbreaks. The high

Figure. Flowchart of classification for severe acute respiratory syndrome (SARS) revised on May 1, 2003. ARDS, acute respiratory distress syndrome.