SINCE OCTOBER 2001, a total of 27 states has reported investigations of multiple groups of schoolchildren who have developed rashes. Rash illnesses among schoolchildren in 14 states were reported in March 1; since then additional states have developed rashes. Rash illnesses among schoolchildren in 14 states were reported in March 1; since then additional states have reported investigations of these reports. CDC is continuing to monitor reports of rashes and is providing technical assistance to state and local health departments investigating these reports.

United States

Although rashes among schoolchildren are common, public concern has been growing because of the number of simultaneous cases reported in schools across the United States. During October 2001–May 2002, rashes among groups of students were reported in approximately 110 U.S. elementary, middle, and high schools. The number of students affected in each school ranged from five to 274; the proportion of students affected ranged from <1% to 47%. The sex distribution of cases varied among the schools, ranging from 33% to 100% female. Rashes varied by presentation, location on the body, and duration. Most affected children were reported as having (1) a pruritic, sunburn-like rash that appeared on the cheeks and arms, (2) a burning sensation on the skin that might be associated with pruritis, or (3) a hive- or nettle-like reaction that was observed moving from one part of the body to another. Rashes tended to be self-limiting and ranged in duration from <1 hour to >1 month. Because of the transient nature of the rashes, most children who were evaluated were seen by school nurses; some children who had recurring or persistent rashes were seen by dermatologists. Accompanying signs and symptoms such as conjunctivitis, fever, vomiting, sore throat, or headaches were absent in all but a few cases. The etiology of the rash illnesses remains unknown in several states. Alaska, Illinois, Kentucky, Minnesota, Mississippi, and New York have received reports of cases associated with parvovirus B19, and viral cultures of throat and stool specimens. Dates of rash onset for these children ranged from March 11 to April 1. Of the 17 children interviewed, 12 (71%) were females. The ages of the students ranged from 5-13 years (mean: 9 years). Five (29%) children reported having had symptoms (e.g., fatigue, stuffy nose, and sore throat) that occurred within 4 days before rash onset. Of six (35%) children who reported that another family member had a rash, four (67%) had family members whose rashes occurred before the child's rash onset, and two (33%) had family members whose onset followed the child's rash. Fifteen (88%) children reported their rashes to be itchy; of these, nine (60%) children reported no association with time of day or place. Three (18%) of the 17 children that were interviewed reported having a low-grade fever (i.e., <100.3°F [37.9°C]), nine (53%) children reported that the rashes were warm to the touch, eight (47%) children associated the rashes with a burning sensation, and 13 (77%) children reported that the rashes reappeared; information for one child was not recorded. Five (29%) children had rashes that began on the face and nine (53%) children rashes that began on the extremities or stomach before spreading; two (12%) children had rashes that did not spread. On examination, health-care providers described the rashes as maculo-
19, a total of 33 (21%) students with Missouri. During January, the Georgia Division of Public Health received a report that 12 students from an elementary school had developed pruritic rashes in a single day; 10 children were in the same class. Dermatologists who examined all 12 children diagnosed the rashes as contact dermatitis. The rashes resolved by the next day, and no additional cases occurred. The school cleaned the classroom on the day the rashes occurred, including vacuuming the carpet, washing table tops, and wet dusting all surfaces. The school nurse determined that the pruritic rashes were the only sign or symptom; one child had a history of a preceding illness (a cold the previous week). The onset of rash illnesses began after one child developed a pruritic eczematous rash on one arm. After several minutes, a second child complained that her arm was itching; within the hour, eight children seated at the same table also were scratching their arms and complaining about rashes. A child from another classroom reported a pruritic rash after sitting with the other children at lunch; another child, also from another class, reported a rash after seeing the index child in the school clinic. Although environmental or allergic exposure cannot be ruled out, the school nurse’s description suggests that all the rashes (with the exception of the index case) were caused by scratching secondary to observing, encountering, or interacting with the child with the eczematous rash.

Georgia. During February 5–March 19, a total of 33 (21%) students with rash illness was reported in a rural elementary school with 161 students; 12 (36%) of the 33 affected students sought medical care. The illnesses were mild and lasted a median of 4 days (range: 6 hours–14 days). Of the 71 children in kindergarten through fourth grade, 25 (35%) were affected. Most affected students had rashes limited to the hands and forearms, but five (15%) children had rashes that were generalized or involved the face; five (15%) children had pruritic rashes. Dates of rash onset were February 19 for six cases and February 28 for 12 cases; these 18 cases accounted for 55% of cases among students. However, single cases continued to be reported as late as March 19. Of the 33 cases reported, 23 (70%) occurred among girls. Two siblings developed rashes 4 days apart; no other rashes among family members were reported to the school nurse. Contact dermatitis was the most likely explanation for most cases, possibly from frequent use of hand cleaners and alcohol-based sanitizers or from surfaces cleaned with ammonia-based products. Other possible etiologies offered by clinicians for these rashes included scabies, dry skin, and parvovirus B19 infection; however, none of these diagnoses was confirmed.

Public Health Response

Despite public perceptions that all rash cases are inter-related, even in a single school, children’s rashes can result from a variety of etiologies, including medications, dry or sensitive skin, eczema, allergies, viral infections, and psychogenic or environmental factors. Investigations have identified cases for some of the rashes reported. In other cases, the etiology remains unknown.

CDC is continuing to monitor reports of groups of schoolchildren with rashes and is providing technical assistance to state and local health departments investigating these reports. In addition, CDC is receiving public inquiries from adults (with or without exposure to children) who suspect they might have a related rash. These public inquiries are forwarded to state or local health departments for follow-up.

CDC Editorial Note: Rashes reported in schools have affected school policies and practices. Normal school operations were disrupted when students were moved or evacuated from their classrooms, and the costs of conducting environmental assessments have added a financial burden. In the absence of an identifiable etiology for the rashes, many school administrators and board members had to consider whether short-term school closures were warranted and to decide if children with rashes should be excluded from school or if children without rashes should be permitted to stay home from school.

Schools that identify groups of students and/or staff with rashes should report cases to their state or local health department to determine what kind of investigation should be conducted to ensure that no identifiable hazards exist within the school setting. To assist with these efforts, CDC has developed and distributed to health departments a document with suggested approaches for investigating reports of rashes among groups of schoolchildren. In particular, efforts should be made to (1) collect uniform information from affected persons so cases of rashes reportedly associated with school settings can be differentiated from rashes occurring from other causes; (2) monitor reported cases to ensure that the rashes have resolved; (3) determine whether similar rashes are occurring among household members who have not been exposed to the school setting; and (4) confirm that no other associated signs and symptoms are occurring or developing subsequent to the rashes.

When accompanied by other signs and symptoms, rashes can be an important indicator of serious health conditions; however, few schoolchildren with rashes had any accompanying signs and symptoms. The level of parental concern and media attention elicited by reports of rashes among schoolchildren underscores the need for continuing investigation.

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2 references omitted

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