



Importation of Wild Poliovirus Into Qinghai Province—China, 1999

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INDIGENOUS WILD POLIOVIRUS WAS LAST isolated in China in 1994. On October 13, 1999, a case of acute flaccid paralysis (AFP) in a 16-month-old boy was reported to public health authorities in Xunhua Autonomous County, Haidong Prefecture, Qinghai Province, China. Following onset of paralysis on October 12, the boy was no longer able to stand or walk. Two stool samples, taken within 14 days of onset of paralysis, were analyzed in the Qinghai provincial laboratory and yielded poliovirus. The isolates were later differentiated as wild poliovirus type 1 at the National Poliovirus Laboratory in Beijing. Stool specimens from one of five children with whom the boy had contact yielded wild poliovirus type 1. This report describes this case of poliomyelitis and the public health response to the case in China.

The case occurred among the Sala, a group of approximately 80,000 persons who live mainly in Xunhua Autonomous County, Qinghai, or in neighboring Gansu province. Many Sala are traders, and Sala men travel widely within Qinghai and to nearby provinces, including Gansu, Sichuan, and Xinjiang, and to Tibet as far south as the border with Nepal. The Sala have trade contacts in India, Pakistan, and Central Asia. Neither the case-patient nor immediate family members are reported to have traveled outside Xunhua County during the 2 months before paralysis onset.

Despite intensive investigations, including retrospective record reviews in health-care facilities and active case

searches in villages in selected areas, no additional polio cases or other evidence of continued poliovirus circulation was found. Since 1996, the quality of AFP surveillance in Qinghai has been excellent, with nonpolio AFP rates of >1.5 per 100,000 population and proportion of cases with two adequate stool specimens between 70%-90% annually. The provincial laboratory in Qinghai has shown proficiency in 1999 and received full accreditation within the World Health Organization polio laboratory network.

The Qinghai poliovirus strain is closely related (98%) to poliovirus isolates from central and northern India during 1998-1999, but unrelated to polioviruses that circulated in China until 1994. Despite the absence of a history of travel by the case-patient or his immediate family, evidence suggests that the virus was imported from a neighboring country, probably India, where polio is endemic. The extent of virus circulation following importation has not yet been determined (the paralytic case-to-infection ratio is typically 1:200 in a fully susceptible population). No evidence exists of continued circulation of poliovirus.

Before confirmation of the index case (but after onset of paralysis), province-wide supplementary vaccination with oral poliovirus vaccine, planned earlier in 1999 and targeting children aged 0-3 years, was carried out in late November in both Qinghai and Tibet. In response to confirmation of the index case, an initial local case-response vaccination round was conducted in Xunhua County in November. This was followed by round 1 of a larger, intense house-to-house mopping-up vaccination activity targeting children aged 0-9 years that was implemented in six of eight prefectures of Qinghai, beginning in early December. Round 2 in January 2000 also included house-to-house mopping-up vaccination targeting 7.1 million children in an even

larger area, including Qinghai, Ningxia, most of Gansu, and parts of Tibet. These extensive mopping-up vaccination activities were in addition to the second round of subnational immunization days conducted January 5-6, 2000, in all provinces in high-risk areas to vaccinate children aged 0-3 years. All vaccination activities reported good coverage of the target population. Two additional large multiple-province vaccination rounds, targeting approximately 26 million children, are planned for March and April.

Since the case was identified, surveillance activities have been intensified through active case searches in health-care facilities and communities during mopping-up vaccination and retrospective review of hospital records. Special assessments of the quality of virologic surveillance were conducted, including specimen collection and handling procedures, and the quality of specimen processing at the provincial laboratory.

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CDC Editorial Note: Preliminary data from this investigation suggest that the polio case in Qinghai was caused by importation of wild poliovirus with limited circulation. No other cases have been detected despite high-quality AFP surveillance and extensive searches of hospital records, health-care facilities, and communities. Further intensive surveillance and vaccination activities, including active house-to-house searches for recent AFP cases, are being conducted.

The detection of this case in a sparsely populated rural area of China indicates that high-quality AFP surveillance continues to be maintained in China. The



detection also highlights the need for all polio-free countries to remain vigilant to allow early detection of wild poliovirus imported from countries where polio is endemic and to institute rapid control measures.

Prevalence of Selected Risk Factors for Chronic Disease and Injury Among American Indians and Alaska Natives—United States, 1995-1998

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SINCE THE 1950s, MORBIDITY AND MORTALITY attributable to infectious diseases among American Indians and Alaska Natives (AIs/ANs) have declined and chronic diseases, especially diabetes, and injury have remained important determinants of poor health.¹ Knowledge of the prevalence of behavioral risk factors for chronic disease and injury can be used to form policies and programs to improve the health of AIs/ANs. Based on data obtained from the Behavioral Risk Factor Surveillance System (BRFSS) from 1993 through 1996, CDC published regional estimates of the prevalence of 10 behavioral risk factors for AIs/ANs.² This report updates data from the earlier report and focuses on three of the 10 risk factors for chronic disease and injury among AIs/ANs.

BRFSS is a state-based, random-digit-dialed telephone survey of the civilian, noninstitutionalized U.S. population aged ≥ 18 years. For this analysis, data from 5964 AI/AN respondents to BRFSS from 1995 through 1998 in 36 states, corresponding to the area covered by the Indian Health Service (IHS) administrative areas, were aggregated into five geographic regions.³ Identification as

AI/AN was based on response to the question, "What is your race?" Data were weighted to both the respondent's probability of selection and the 1990 sex-specific AI/AN census estimates for each state. To account for the complex survey design, SUDAAN was used to calculate confidence intervals.³ Risk measures used for this analysis included current cigarette smoking, awareness of having diabetes, and safety belt non-use. Current cigarette smoking was defined as currently smoking cigarettes and having smoked at least 100 cigarettes. Awareness of having diabetes was defined as having answered "yes" to the question, "Have you ever been told by a doctor that you have diabetes?" Women who were told they had diabetes only during pregnancy were not classified as being aware of having diabetes. At-risk safety belt use was defined as not reporting "always" in response to the question "How often do you use seatbelts when you drive or ride in a car?" The questions on cigarette smoking and diabetes were asked during all 4 years of data collection; the safety belt use question was asked only in 1995 and 1997.

The prevalence of current cigarette smoking among both AI/AN men and women was highest in the northern plains (47.0% for men and 42.1% for women) and lowest in the southwest (25.4% for men and 17.8% for women). The percentage of women who reported current cigarette smoking in Alaska was high (41.8%) compared with the percentage of women smokers in other regions. For all regions combined, men reported current cigarette smoking more frequently than did women (34.7% versus 27.9%).

The prevalence of awareness of having diabetes was slightly higher among AI/AN women (8.4%) than men (6.4%). AI/AN men and women in Alaska had the lowest reported awareness of having diabetes (2.8% and 3.3%, respectively).

Not always wearing a safety belt when riding or driving in a motor vehicle was reported most frequently by men (60.5%) and women (47.1%) in the northern plains and least frequently by

men (21.6%) and women (17.2%) in the Pacific coast region. For all regions combined, men reported not always wearing a safety belt when driving or riding in a motor vehicle more frequently than did women (39.7% versus 30.5%).

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CDC Editorial Note: The findings in this report document regional and sex differences in the prevalence of selected risk factors for chronic disease and injury among AIs/ANs. Significant regional variations were found in the prevalence of cigarette smoking and at-risk safety belt use for both men and women, and in awareness of having diabetes, particularly among women. These rates and the differences observed are similar to those found among AIs/ANs during 1993-1996.² Although the earlier study examined 10 risk behaviors or health conditions, this report only examined three because they demonstrate the most substantial geographic variation and because AIs/ANs are at higher risk for these behaviors or conditions than the general U.S. population.²

Comparison of these findings with the 1994 and 1995 BRFSS for the general U.S. population demonstrate disparities between AIs/ANs and the general population.⁴ Except for the southwest region, compared with the



general population, the prevalence of smoking among AIs/ANs was greater. In addition, in 1995, the prevalence of awareness of having diabetes was greater for AIs/ANs than for the general population, with the exception of AIs/ANs in Alaska. These comparisons can be used to target efforts to eliminate these disparities.

The findings in this report are subject to at least three limitations. First, BRFSS reaches only persons with telephones. Approximately 23% of AI/AN households do not have a telephone—a higher percentage than for any other racial/ethnic group in the United States.⁵ As a result, these findings probably underestimate the health risks for AIs/ANs because those without telephones are more likely to be of lower socioeconomic status and at higher risk for disease than those with telephones.^{6,7} Second, BRFSS does not collect information on tribal affiliation or reservation residency. Aggregating AIs/ANs into geographic regions alone does not account for the diversity of health behaviors among different tribes.^{1,8} Finally, because the estimates were based on self-reported data, they may be subject to recall and social desirability biases. Despite these limitations, BRFSS is the only source of continuously collected population-based information on AI/AN health behaviors. These findings are especially important because little population-based research has been conducted on the health behaviors of this population group.^{9,10}

Monitoring the health behaviors of AIs/ANs enables public health officials to assess levels of risk and regional and sex differences for these risks to better direct prevention efforts. In this way, disparities in risk behaviors that previously have been shown to exist between AIs/ANs and the general U.S. population can be identified.² This is particularly important with the increase in chronic disease among adults in the United States.

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*Alaska = Alaska; East = Alabama, Connecticut, Florida, Kansas, Louisiana, Maine, Massachusetts, Mississippi, New York, North Carolina, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Tennessee, and Texas; Northern Plains = Indiana, Iowa, Michigan, Minnesota, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming; Pacific Coast = California, Idaho, Oregon, Washington; Southwest = Arizona, Colorado, Nevada, New Mexico, and Utah.

Elevated Blood Lead Levels Among Internationally Adopted Children—United States, 1998

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LEAD POISONING HAS BEEN REPORTED RECENTLY among Chinese children adopted by U.S. citizens.¹ However, little is

known about the prevalence of elevated blood lead levels (BLLs) among adoptees from China and other countries. Persistent sources of lead exposure outside the United States include leaded gasoline exhaust; industrial emissions; cottage industries (e.g., battery breaking and recycling plants); traditional medicines; and some cosmetics, ceramic ware, and foods.² In 1998, approximately 15,000 orphans from countries outside the United States who were adopted abroad or were to be adopted in the United States by U.S. citizens were issued U.S. immigrant visas—a nearly two-fold increase over 1988 (L. Lewis, Immigrant and Visa Control and Reporting Division, VISA Office, Bureau of Consular Affairs, U.S. State Department, personal communication, August 1999).³ Some orphans have been abandoned for extended periods and have no obtainable medical history.⁴ Immigrants aged <15 years are not required to have serologic or blood tests either in their country of origin or on entry into the United States unless exposure to syphilis or human immunodeficiency virus is suspected.⁵ To obtain reports on the prevalence of elevated BLLs ($\geq 10 \mu\text{g/dL}$) among international adoptees, CDC contacted 12 international adoption medical specialists identified through the Joint Council on International Children's Services and two collaborating medical specialists.⁶ This report summarizes the results of that investigation, which suggest that international adoptees may arrive in the United States with elevated BLLs.

Of the 14 reporting sites contacted, nine had data on blood lead tests among adopted children who immigrated during 1991-1999. The data represented seven clinical practices where blood lead tests were conducted by venipuncture (five of which tested all international adoptees for BLLs) and two surveys by pediatric providers. Data were included if at least 25 children were tested from a specified country or region.

The prevalences of elevated BLLs ranged from 1% to 13% among Chi-



nese adopted children and from 1% to 5% among Russian adopted children. In six of the nine reports on Chinese children and four of the six reports on Russian children, 70% or more of the children were tested for elevated BLLs within 4 weeks of arrival to the United States. Among 223 Chinese children surveyed by one site, the prevalence of elevated BLLs was 2.3 times higher (18%) among children tested within 4 weeks of arrival in the United States than among children tested after 4 weeks (8%). Limited data were available on the prevalence of elevated BLLs among adopted children from other countries of origin.

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CDC Editorial Note: Most of the reported prevalences of elevated BLLs among Chinese adoptees were higher than the prevalence among U.S. children.⁷ Among U.S. children aged 1-2, 3-5, and 6-11 years, the prevalence of elevated BLLs during 1991-1994 was 6%, 4%, and 2%, respectively.⁷ For some adopted children, blood lead testing occurred soon after arrival to the United States, suggesting that exposure occurred before emigration. The lower prevalence of elevated BLLs among Chinese children tested later than 4 weeks after arrival than among those tested within 4 weeks of arrival further indi-

cates that, for many of these children, elevated BLLs probably developed before they arrived in the United States.

Data are limited on the prevalence of elevated BLLs among children living in China. Among selected populations of children aged 1-6 years living in China, prevalences of elevated BLLs of up to 38% have been reported.⁸ Among Russian school-aged children, prevalences of elevated BLLs of up to 58% have been reported in one city (CDC, unpublished data, August 1999). The lower prevalence of elevated BLLs among children who have emigrated from China and Russia compared with levels among children residing in China and Russia may be related to variations in lead exposure by region of country or to the expected decline in BLLs over time once children have arrived in the United States and are no longer exposed to sources of lead.

In this report, most of the children screened by the international adoption clinics were from Russia or China. Similarly, of all U.S. immigrant visas issued to orphans in 1998, most (55%) were issued to children from Russia and China (L. Lewis, Immigrant and Visa Control and Reporting Division, VISA Office, Bureau of Consular Affairs, U.S. State Department, personal communication, August 1999). Because most children immigrating as adoptees are not screened by the international adoption medical specialist clinics in this report, selection bias may affect this sample.

The American Academy of Pediatrics recommends that children who have been adopted or emigrated from countries where lead poisoning is prevalent should be screened for elevated BLLs.⁹ CDC recommends that young children at high risk for lead exposure be screened with a blood lead test.¹⁰

Accordingly, international adoptees from countries where lead poisoning is prevalent should receive a blood lead test after arrival in the United States. Some adopted children have had high enough levels to warrant chelation therapy (≥ 45 $\mu\text{g}/\text{dL}$). Children with elevated BLLs should receive follow-up medical attention that adheres to CDC guidelines and state and local policies and laws, and their families should receive information on the prevention of lead poisoning.¹⁰ For children with BLLs high enough to warrant source investigation, investigators should consider that lead exposure may have occurred before arrival in the United States in addition to considering sources of lead exposure in the current environment.

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