We hypothesized that the observed proportion of measles case-patients who had been vaccinated can be used to infer the vaccination coverage in a population at risk (Figure). To this end, we assume a vaccine effectiveness of 99% among persons who had received ≥1 doses (3,4). In 2013, countries in the European Union/European Economic Area reported 9,708 measles case-patients for whom vaccination status was known (2). Of those, 11.8% had received ≥1 doses of measles vaccine. On the basis of the relationship derived above, this proportion corresponds to an expected vaccination coverage of 93.1% who had received ≥1 doses, which is consistent with reported numbers. Switzerland reported 3,850 measles case-patients with known vaccination status from August 2006 through June 2009; of these, 7.0% had been vaccinated with ≥1 doses (8). The inferred vaccination coverage of 88.3% is very close to the reported national level of 87.0% for receipt of ≥1 doses at 2 years of age (8). In contrast, the most recent numbers from the United States suggest that vaccination coverage for receipt of ≥1 doses is still well over 90%.

Various complexities might affect the relationship between vaccination coverage in a community and the proportion of case-patients who had been vaccinated. First, we assume a vaccine effectiveness of 99% among persons who received ≥1 doses. Other estimates indicate that
Lassa fever is a zoonosis caused by Lassa virus (LASV; family Arenaviridae, genus Lassavirus). The primary reservoir of LASV is the multimammate rat (Mastomys natalensis), which is found throughout sub-Saharan Africa. LASV outbreaks among humans occur only in West Africa in 2 noncontiguous areas: 1 in Guinea, Liberia, and Sierra Leone; and 1 in Nigeria. Rare cases and evidence of exposure of humans have been documented in neighboring countries (i.e., Benin, Burkina Faso, Côte d’Ivoire, Ghana, Mali, and Togo) (1). LASV RNA has been detected in only 4 patients: 1 in Germany who had traveled in Burkina Faso, Côte d’Ivoire, and Ghana (2); 1 in the United Kingdom who had returned from Mali (3); and 2 in

References


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Lassa Virus in Multimammate Rats, Côte d’Ivoire, 2013


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