Italy (data shown on www.spes.iss.it) (2). In 2002, the region most affected was Campania, where the estimated annual incidence was 3750/100 000, corresponding to an estimate of more than 40 000 cases in children <15 years of age. Further investigation showed that more than 600 individuals had been hospitalised, and 16 cases of encephalitis and 4 deaths had occurred. The 2002 epidemic peaked in May, and incidence decreased sharply from June onwards.

The high incidence of measles was predictable given the high proportion of susceptible subjects in many Italian areas. Following the 2002 epidemic, a national plan for measles and congenital rubella elimination ('Piano Nazionale per l'Eliminazione del Morbillo e della Rosolia Congenità', http://www.epicentro.iss.it/focus/morbillo/workshop.htm) has been developed jointly by the Assessorati Regionali alla Sanità (regional health authorities), the Istituto Superiore di Sanità (National Institute of Health) and the Ministero della Salute (ministry of health). Key actions to improve measles vaccination coverage in the plan include a coordinated training activity targeting health professionals involved in vaccination services, and a national campaign targeting children of school age (i.e., 1993-1997 birth cohorts in 2004, 1992-91 birth cohorts in 2005).

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Outbreak of multidrug resistant *Salmonella* Newport due to the consumption of horsemeat in France

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From May to June 2003, a total of 14 human cases of multidrug-resistant *Salmonella enterica* subsp. *enterica* serotype Newport were reported in a localised geographical area in the north of France (figures 1 and 2). The serotype was resistant to beta-lactams (ampicillin, ticarcillin, piperacillin, 1st, 2nd and 3rd generation cephalosporins except cefepime and imipenem), streptomycin, sulfonamide, tetracycline, and chloramphenicol. Both sexes (sex-ratio = 1) and all age groups (9 children, 5 adults) were affected (mean age =24 years). All patients presented with diarrhoea, which was bloody in seven patients (50%). Eleven patients were hospitalised (79%). No death has been recorded.

Figure 1. Cases by day of onset. *S.* Newport outbreak, France, May-June 2003.

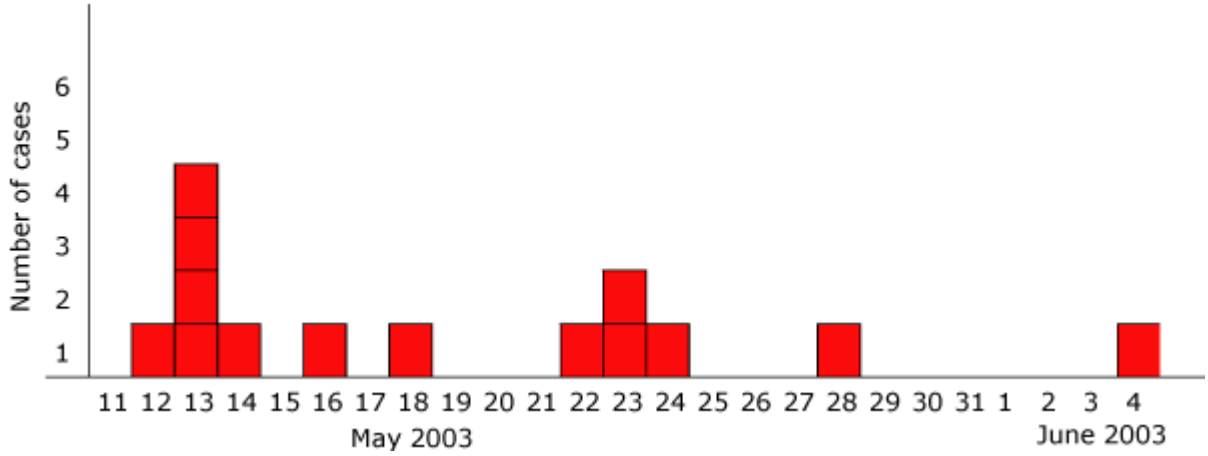
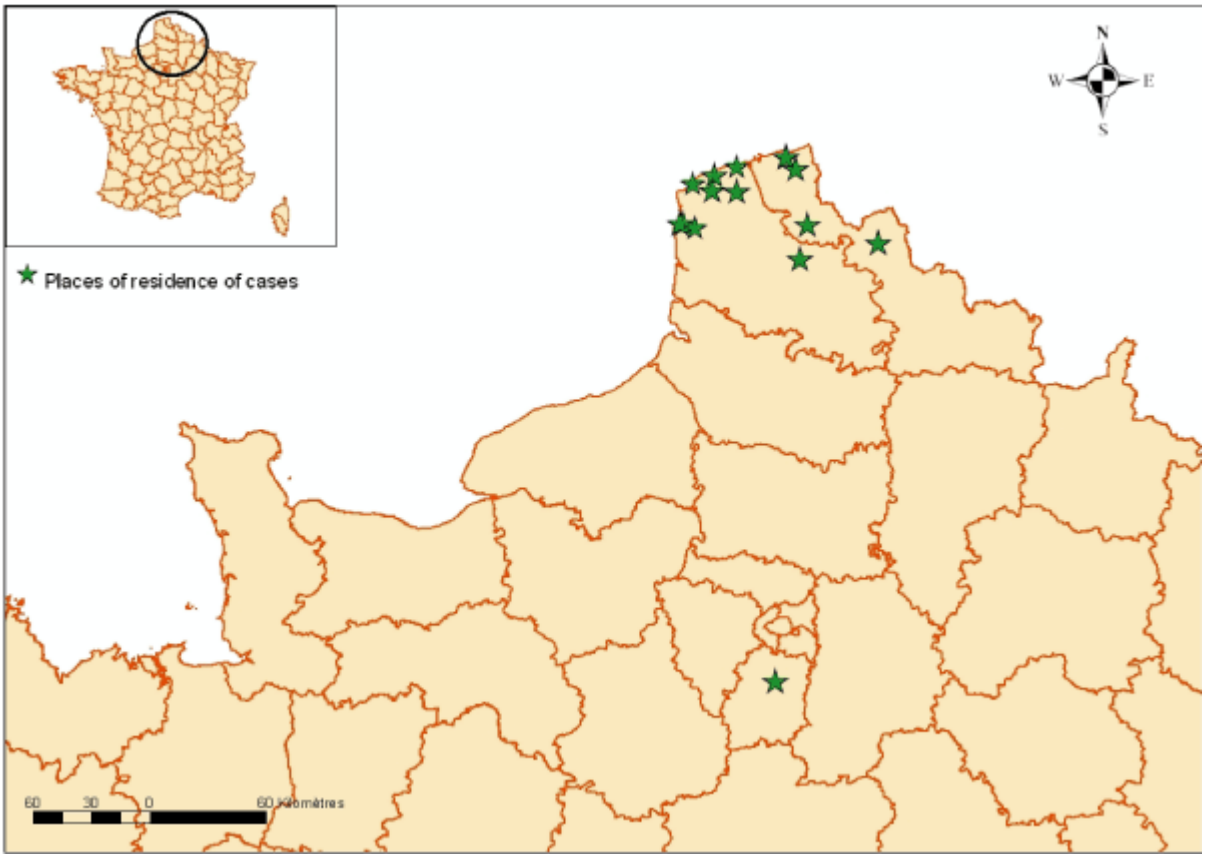


Figure 2. Cases by place of residence. *S.* Newport outbreak, France, May-June 2003.



All cases reported having eaten horsemeat consumed as ground meat (11 cases, and consumed raw by at least 6 cases) or steak (3 cases). Cases had purchased their horsemeat from butchers (7 cases) and markets (7 cases) in different towns. Among the different suppliers of the retail outlets, one wholesaler, located in the north of France, was shown to have supplied all fourteen outlets. The wholesaler purchases its horsemeat from 6 different countries outside France, predominantly in South and North America, but also in Europe and Oceania.

So far, no single vehicle of infection (common carcass or common supplier abroad) has been identified. Since the origin of the horsemeat is not recorded after purchase by the wholesaler, it may prove impossible to determine the exact origin of the contaminated meat.

Fourteen isolates were tested for the presence of *bla*$_{CMY}$ gene by PCR. All the isolates were positive in a CMY-specific PCR assay. Sequencing of PCR products showed a beta-lactamase gene identical to *cmy-2*.

Data from routine *Salmonella* surveillance on humans and domestic animals (primarily poultry, pigs and cattle) and foods showed that *S.* Newport isolates with the current outbreak resistance profile are very unusual in France. Four isolates have been identified in humans 2000 (n=3) and 2002 (n=1) and none in animals aand foods.

The CMY-2 gene is a AmpC-like beta lactamase plasmid mediated gene, inducing resistance to cephamycin and extended- spectrum cephlosporins. The CMY-2 plasmid can undergo transfer between different bacterial species (*E. coli*, Klebsiella sp, Salmonella sp, etc) and be transmitted between food, animals and humans (1-3). In the United States, the incidence of S. Newport human illness increased markedly in the late 1990s (4). The increase in S. Newport illness in human has been driven by an increase in the highly resistant strain *S.* Newport MDR-AmpC (4). Illness due to *S.* Newport MDR-AmpC is also emerging in cattle. Risk factors for human illness include contact with cattle and consumption of bovine products.

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Source of US monkeypox outbreak of identified, and CDC issues updated interim guidance for prevention and treatment of monkeypox

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The Centers for Disease Control and Prevention (CDC) in the United States (US) believes it has identified the source of the current outbreak of monkeypox, after confirming the presence of monkeypox virus in one Gambian giant rat, three dormice, and two rope squirrels that were part of a shipment of African rodents imported into the US on 9 April. (1)

As of 1 July, 81 cases of human monkeypox had been reported to CDC (2). CDC and local US state health departments continue to investigate cases among persons who had contact with pet prairie dogs or other small mammals (3). Thirty two (40%) of the 81 cases have been laboratory confirmed for monkeypox (2).

The reported cases are widely dispersed over the midwestern states. So far there have been reports from Illinois (16), Indiana (22), Kansas (one), Missouri (two), Ohio (one), and Wisconsin (39). No cases of monkeypox that could be attributed exclusively to person to person contact have been confirmed (3).