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E-alert 9 March: Nationwide outbreak of Salmonella enterica serotype Agona infections in infants in France, linked to infant milk formula, investigations ongoing

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In January and February 2005, the Centre National de Référence des Salmonelles (French National Reference Centre for Salmonella, NRC-Salm), noted an increase in isolates of *Salmonella* Agona. As of 4 March, 32 isolates have been reported, which is four times more than the median number of isolates sent to the NRC-Salm during these months in 2000-2004.

We defined a case as an infant with clinical symptoms compatible with a salmonella infection and an isolate of *Salmonella* Agona from stools or blood or urine, since 1 January 2005. As of 6 March, 21 infant cases have been investigated. The patients were all aged between 1 and 7 months and live in 14 different départements throughout France (Figure 1). The cases investigated so far occurred between 28 December and 17 February 2005 (Figure 2). The parents of all 21 infants reported feeding their infants milk made with different types of the Picot brand of infant powdered formula in the week before onset of symptoms. The parents used 5 different brands of bottled water to prepare the milk. Two infants had also consumed drinks containing fennel. Twenty-one healthy infants aged between 1 and 7 months were identified as controls, with the help of the sick infants' attending physicians and the laboratories. None of the controls had consumed any Picot brand milk formula.

These preliminary results strongly suggest that milk formula prepared by this company is the source of this outbreak. Investigations are ongoing, particularly microbiological examination of the products and the production site, and further typing of the human isolates.

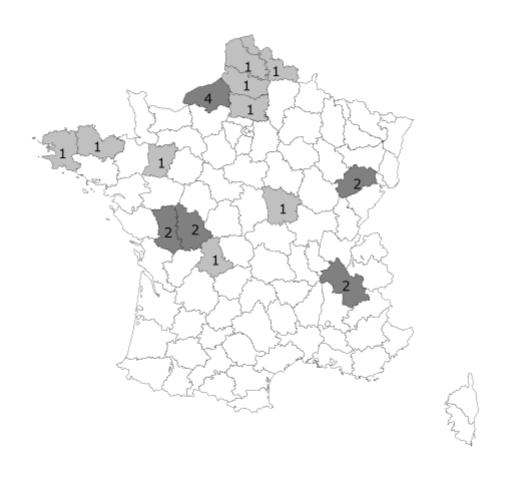
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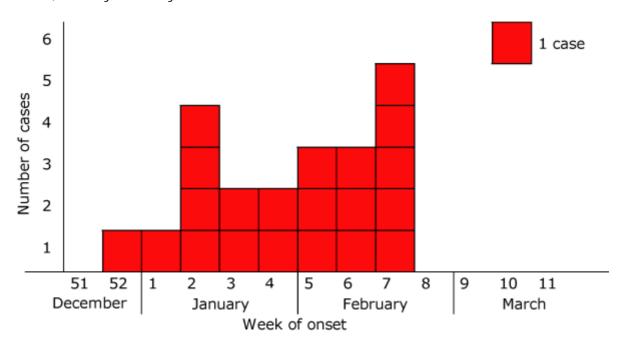
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**Figure 1.** Geographical distribution of infant cases of *Salmonella* Agona infection, France, January-February 2005



**Figure 2.** Cases of *Salmonella* Agona infection in infants, by week of onset of symptoms, France, January-February 2005



On 4 March, based on the preliminary results of the epidemiological investigation, the French authorities recalled all instant milk formula produced under the Picot brand. Consumers have been advised not to drink any Picot formula and to discard the containers. Preliminary information indicates that this company exports its milk formula to Asia. Investigations are being carried out to identify if other countries have received its products.

A warning was posted on the European Early Warning and Response System on 4 March, and an urgent request for information was sent via Enter-net (the international surveillance network for human gastrointestinal infections, <a href="http://www.hpa.org.uk/hpa/inter/enter-net\_menu.htm">http://www.hpa.org.uk/hpa/inter/enter-net\_menu.htm</a>) on 7 March. Information is available in French on the Institut de Veille Sanitaire's website [1,2].

Salmonella Agona is one of approximately 2000 salmonella serotypes that can cause illness in humans. The NRC-Salm identified approximately 100 isolates each year between 2000 and 2004. Like most other salmonella serotypes, Salmonella Agona is found in a variety of animal reservoirs in France, including poultry, cattle, pigs, and in animal feed [3]. An outbreak of Salmonella Agona infections in infants occurred in Germany in 2003, and was attributed to anise-fennel tea and fennel and anise seed drinks [4]. Other outbreaks have been attributed to dried milk [5], to a commercial peanut flavoured snack [6], and a commercial cereal product [5].

To report cases that could be linked to this outbreak, or to obtain additional information, please contact Henriette de Valk (h.devalk@invs.sante.fr, or telephone +33 1 41 79 67 28) or Emmanuelle Espié (e.espie@invs.sante.fr, tel. +33 1 41 79 67 35), or contact Enter-net at enter-net@hpa.org.uk.

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## Occupationally acquired HIV: international reports to December 2002

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A report collating both 'definite' and 'possible'\* HIV seroconversion cases occurring in