

Salmonella Hadar outbreak in Spain, July-August 2005- Lessons learnt

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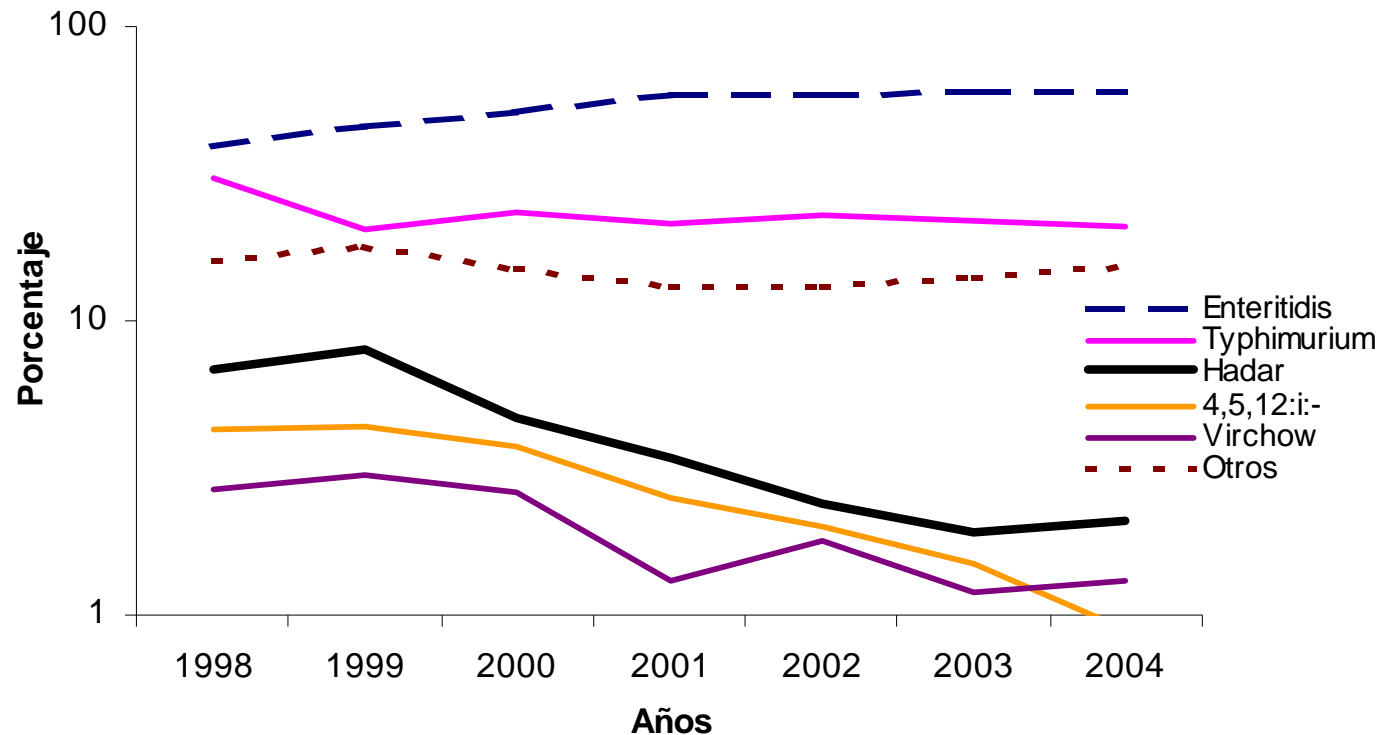
EpiSouth Training Module, Madrid, June 15, 2009

Public health system in Spain

- 19 Autonomous regions
- Infectious diseases surveillance managed at regional level
- Decree 2210/1995, 28 December: national surveillance network established
- Notification when:
 - Outbreaks of any notifiable disease to be notified immediately
 - Outbreaks which might affect more than one region
 - Outbreaks related to a specific product
 - Outbreaks that for severity or magnitude are of national importance



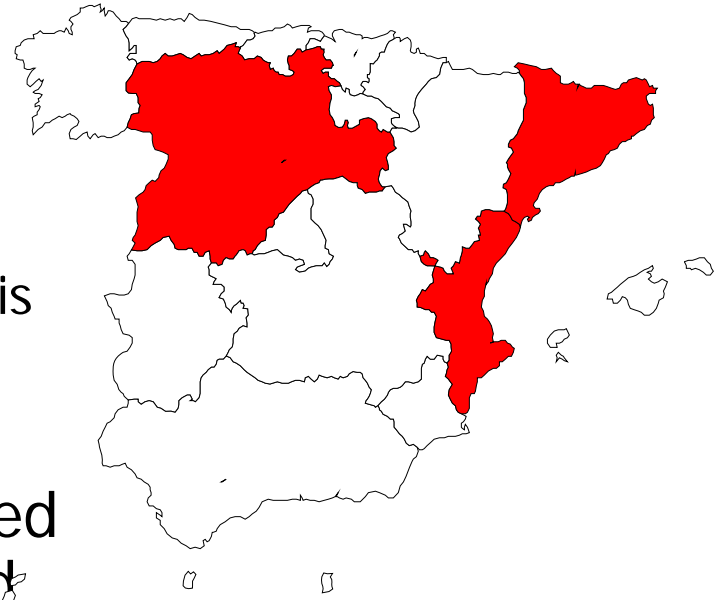
Salmonella in Spain



- Main cause of bacterial gastroenteritis
- 1993-2002: 80% of outbreaks with known causal agent

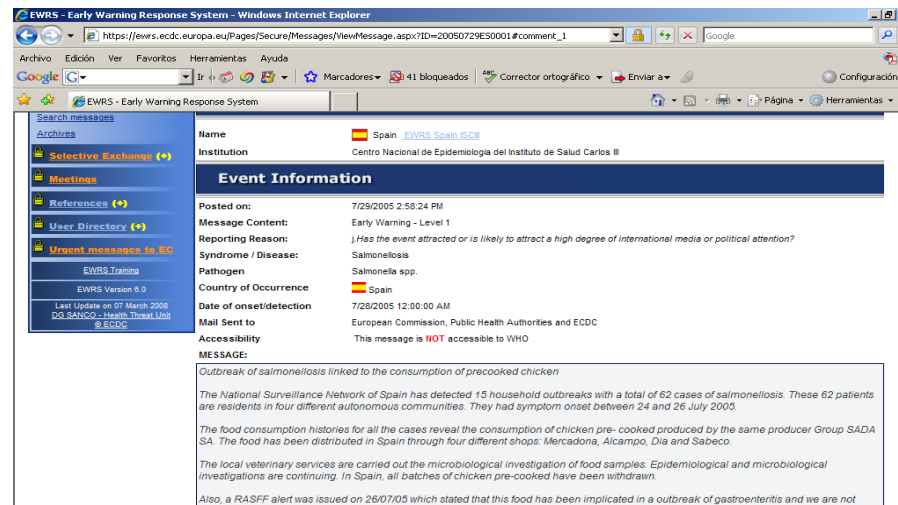
The outbreak alert in Spain

- 28 July:
 - 15 household clusters of gastroenteritis
 - 3 different autonomous regions
- Preliminary investigations: precooked roasted chicken from a single brand (Brand A)
- 28 July:
 - Food Safety Agency (FSA) launches alert.
 - Media awareness campaign - MoH
 - Implicated factory inspected
 - Chicken Brand A recalled
 - Outbreak investigation coordinated by the National Centre for Epidemiology



The outbreak alert at EU level

- Summer months in Spain with high tourist numbers
- 29 of July
 - Message posted on Early Warning and Response System (EWRS) – confidential way for EU Member States to communicate about communicable disease outbreaks
 - Message distributed through formed ENTERNET network
 - network for food and waterborne disease outbreaks



The screenshot shows a web browser window displaying the EWRS interface. The browser title is "EWRS - Early Warning Response System - Windows Internet Explorer". The address bar shows the URL: "https://ewrs.ecdc.europa.eu/Pages/Secure/Messages/ViewMessage.aspx?ID=20050729ES0001#comment_1". The browser's search bar contains "Google".

The EWRS interface includes a left-hand navigation menu with options: "Search messages", "Archives", "Selective Exchange (+)", "Messages", "References (+)", "User Directory (+)", "Urgent messages to EC", "EWRS Training", "EWRS Version 0.0", and "Last Update on 07 March 2008 DS SANCO - Health Threat List © ECDC".

The main content area displays the following information:

- Name:** Spain EWRS Spain_SCI
- Institution:** Centro Nacional de Epidemiología del Instituto de Salud Carlos III
- Event Information:**
 - Posted on:** 7/29/2005 2:58:24 PM
 - Message Content:** Early Warning - Level 1
 - Reporting Reason:** ¡Has the event attracted or is likely to attract a high degree of international media or political attention?
 - Syndrome / Disease:** Salmonellosis
 - Pathogen:** Salmonella spp.
 - Country of Occurrence:** Spain
 - Date of onset/detection:** 7/28/2005 12:00:00 AM
 - Mail Sent to:** European Commission, Public Health Authorities and ECDC
 - Accessibility:** This message is **NOT** accessible to WHO

The **MESSAGE:** section contains the following text:

Outbreak of salmonellosis linked to the consumption of precooked chicken

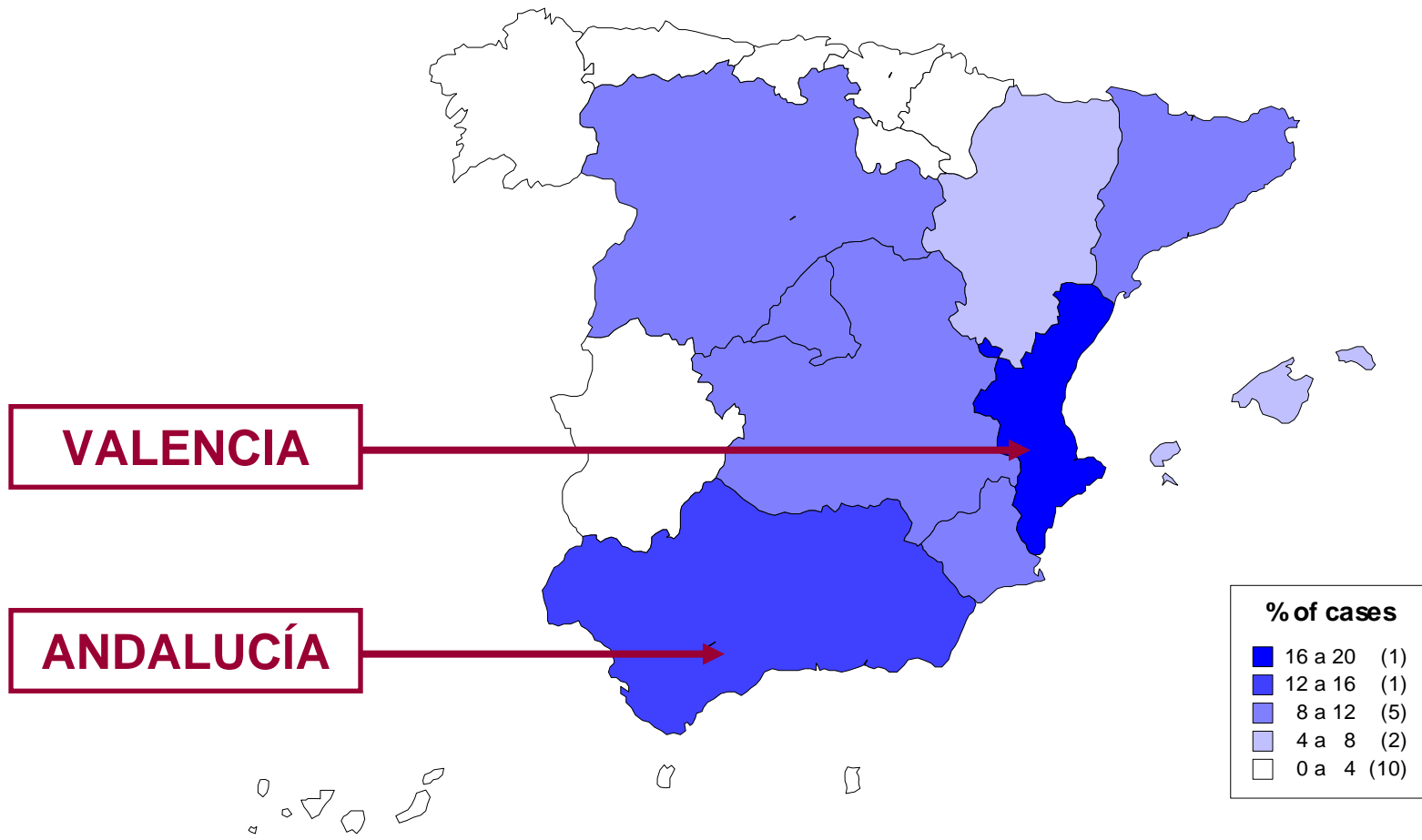
The National Surveillance Network of Spain has detected 15 household outbreaks with a total of 62 cases of salmonellosis. These 62 patients are residents in four different autonomous communities. They had symptom onset between 24 and 26 July 2005.

The food consumption histories for all the cases reveal the consumption of chicken pre-cooked produced by the same producer Group SADA SA. The food has been distributed in Spain through four different shops: Mercadona, Alcampo, Dia and Sabeco.

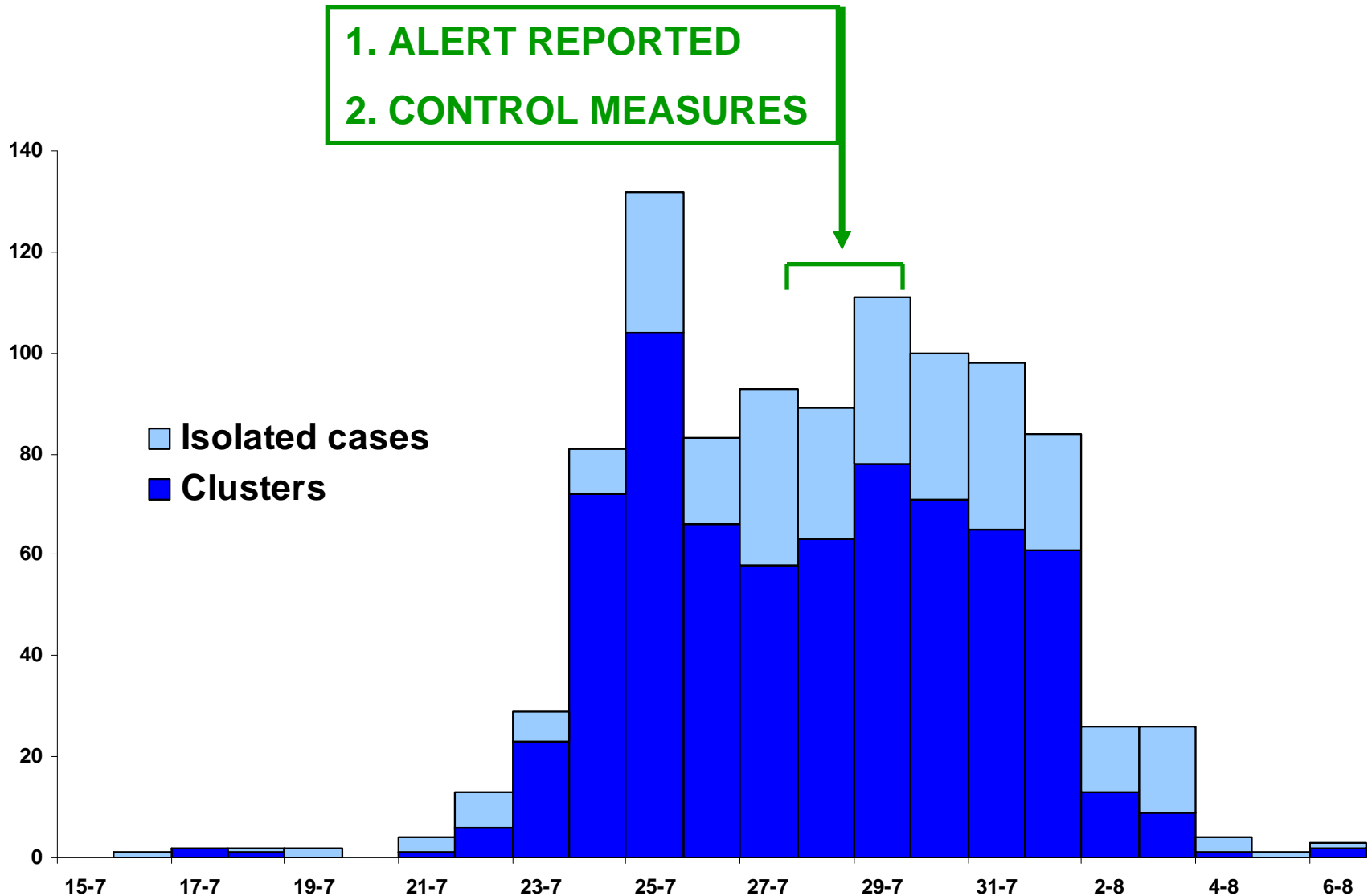
The local veterinary services are carried out the microbiological investigation of food samples. Epidemiological and microbiological investigations are continuing. In Spain, all batches of chicken pre-cooked have been withdrawn.

Also, a RASFF alert was issued on 26/07/05 which stated that this food has been implicated in a outbreak of gastroenteritis and we are not

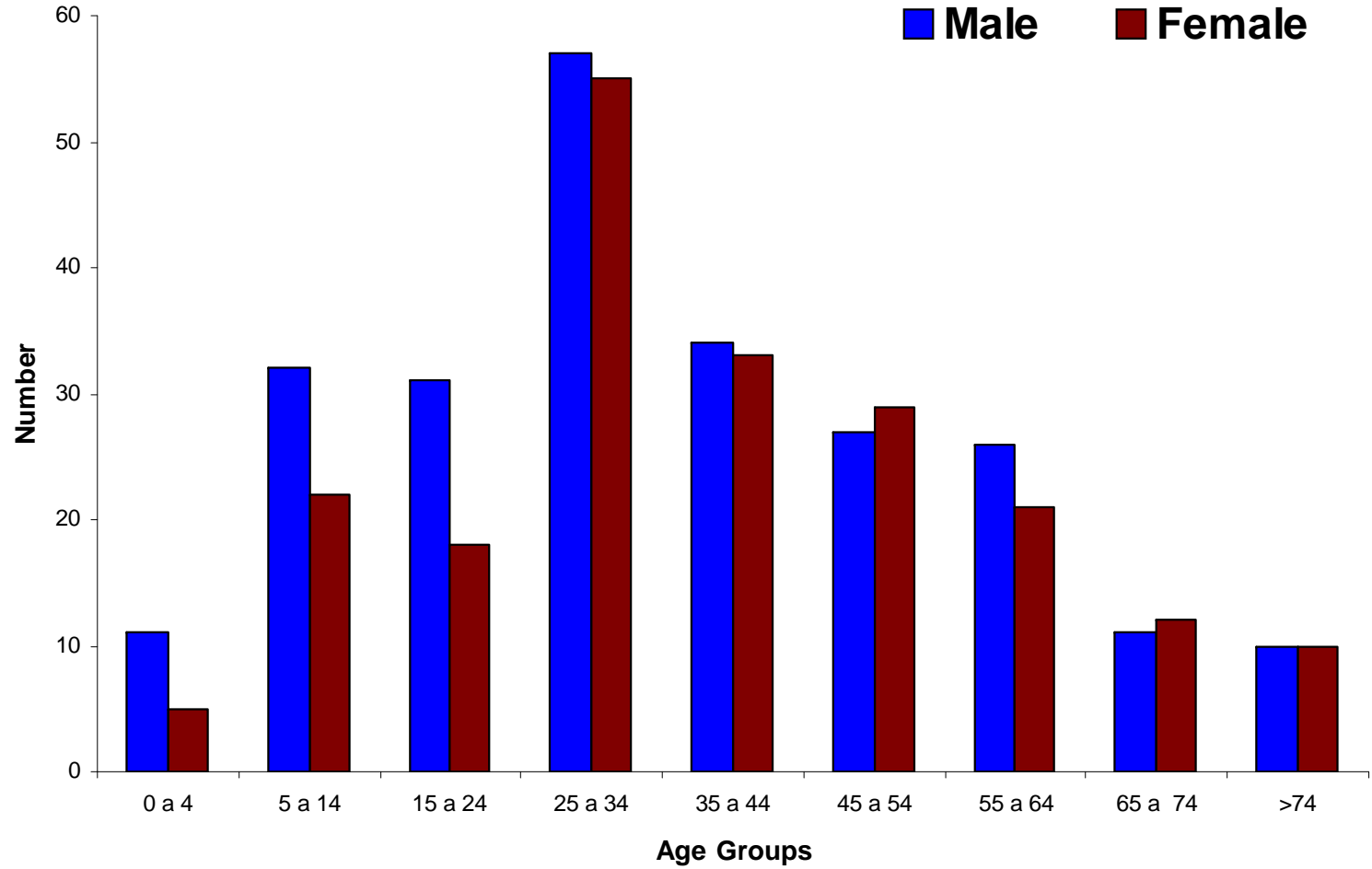
Geographical Distribution (N=2883)



Clusters (N=696) and isolated cases (N=288) of gastroenteritis by date of onset of symptoms, July-August 2005, Spain.



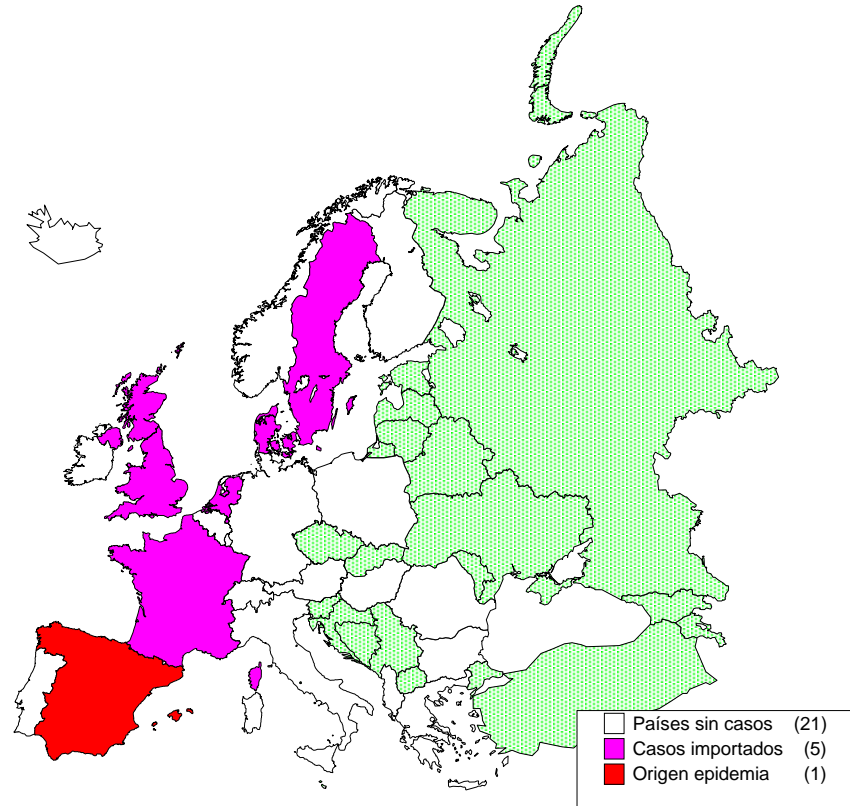
Age and Sex Distribution (N=444)



Cases reported from EU countries

Imported cases in:

- United Kingdom
- France
- Denmark
- Sweden



Microbiological Investigations

- Regional laboratories: 60% (N=378) *Salmonella* spp.
- National Reference Laboratory

	Faecal (%)	Chicken (%)
Samples received	891 (100)	58 (100)
<i>Salmonella hadar</i>	768 (86)	51 (90)
Serotype 2	231 (30)	
Serotype 10	1	
Resistant to: Amp, Cef, Strep, Tet	62 (27)	

- **PGFE profile between chicken and human samples indistinguishable**

Epidemiological studies

- Case control study
 - Clusters with 2 or more cases
 - Controls: families that report eating chicken and families that report eating 'pre-cooked' chicken of any kind
 - Conducted by telephone and in supermarkets
- Results

Exposure	Cases (N)	Controls (N)	OR	CI 95%
Pre-cooked roasted chicken	23 (23)	12 (43)	--	LL: 11.7
Confirmed Brand A	16 (16)	1 (8)	--	LL: 7.5

Food Safety and Environmental studies

- Product was withdrawn from market on 29/07/2005
 - Distributed units: 191.000
 - Withdrawn units: 183.600
 - Difference: 7.400
- 9 cases reported having purchased the product after this date
- Factory for Brand A chicken was inspected by Regional and National Food authorities on 28/07/2009
- No official report of the inspection was ever published or shared with public health authorities
- No official information was available about the process of preparation of the chicken, how many batches had been produced and on which dates etc.

Media reports

- Rumors of cases
- Rumors of existing problems in the implicated factory
- Rumors of results of official factory inspection

ABC.es Hemeroteca: el fabricante encuentra en una tubería el origen de la salmonella causante de los casos de gastroenteritis

El Grupo Sada, fabricante del pollo precocinado que ha provocado 30 brotes de gastroenteritis con al menos 120 afectados en toda España, anunció hoy que el origen de la contaminación por salmonella que afecta a sus productos ha sido localizada en una de las tuberías que dosificaba la salsa de estos pollos en su planta de Lominchar (Toledo). La empresa señala que la "incidencia" únicamente ha afectado a los productos "Pollo Asado Sada" y "Pollo Asado Pimpollo", que han sido ya retirados del mercado, "sin que ningún otro producto elaborado por la compañía sea objeto de ninguna alerta sanitaria". Por tanto, el resto de productos que puedan encontrarse en el mercado están en perfectas condiciones de consumo.

Aumentan a 117 los casos de intoxicación alimentaria por comer pollo asado envasado · ELPAÍS.COM

Aumentan a 117 los casos de intoxicación alimentaria por comer pollo asado envasado

Algunos hospitalizados comienzan a recibir el alta

AGENCIAS - Madrid - 30/07/2005

Ocho nuevos casos de intoxicación alimentaria por la ingesta de pollo asado envasado al vacío con salmonella se han detectado en las últimas horas en la Región de Murcia y otros cuatro en Andalucía, mientras algunos hospitalizados en diversas provincias han comenzado hoy a recibir el alta. Se calcula que el número global de afectados en distintos puntos del Este y Sur peninsular alcanza ya los 117.

El Ministerio de Sanidad y Consumo, a través de la Agencia de Seguridad Alimentaria (AES), alertó ayer sobre dos partidas de pollo precocinado envasado al vacío, presuntamente contaminadas con salmonella, de las marcas Pimpollo y Pollo Asado SADA, que han sido retiradas ya del mercado por la empresa comercializadora, SADA. Del total de casos detectados, Murcia registra al menos 10.

con salmonella asciende a más de 400

Aumentan los casos de intoxicación por comer pollo asado envasado

La AESA anuncia que la contaminación por salmonella en los pollos envasados asciende a más de 400 personas hospitalizadas.

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Scientific Communication

- August 9 and 11, 2009, updates on epidemiological situation in Eurosurveillance
- To inform public health professionals within the EU and outside

The screenshot shows a Windows Internet Explorer browser window displaying the Eurosurveillance website. The address bar shows the URL: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=2770>. The browser's menu bar includes Archivo, Edición, Ver, Favoritos, Herramientas, and Ayuda. The toolbar contains various icons for navigation and utility, including a search bar with the Google logo, a home button, and a printer icon. The website header features the Eurosurveillance logo, which consists of a globe with yellow stars, and the text "Eurosurveillance" in a large blue font, followed by the subtitle "Europe's leading journal on infectious disease epidemiology, prevention and control". Below the header is a navigation menu with links for HOME, ARCHIVES, ABOUT US, EDITORIAL POLICY, FOR AUTHORS, and LINKS. The main content area displays the article title "Eurosurveillance, Volume 10, Issue 32, 11 August 2005" and the article title "E-alert 9 August: Over 2000 cases so far in Salmonella Hadar outbreak in Spain associated with consumption of pre-cooked chicken, July-August, 2005". The article text includes the citation: "Lenglet A, National Epidemiological Surveillance Network of Spain. E-alert 9 August: Over 2000 cases so far in Salmonella Hadar outbreak in Spain associated with consumption of pre-cooked chicken, July-August, 2005. Euro Surveill. 2005;10(32):pii=2770. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=2770>". The author information is "Annick Lenglet¹ (adanyelle@isciii.es), on behalf of the National Epidemiological Surveillance Network of Spain". On the right side, there is a section titled "In this issue" with a list of other articles. On the left side, there is a sidebar with an "Advanced search" box, an "RSS Feed" button, and a "Subscribe" button. At the bottom left, there is a notice about "IMMUNISATION WEEK" on 17 April 2008.

Stakeholders for this outbreak at National Level

- Ministry of Health
- National Centre for Epidemiology
- Regional Public Health Services
- National Laboratory for Microbiology
- Food safety authorities
- The public
- The media

Stakeholders for this outbreak at international level

- European member states
- Tourists
- Public health authorities

Conclusions

- Largest described outbreak in Spain
- Affected almost all autonomous regions in Spain
- The probable cause of the outbreak was the consumption of Brand A precooked chicken
- Control measures highly successful
 - Could they have been implemented earlier?
- Reasons for size of outbreak:
 - National distribution of chicken product
 - Summer – change in food eating habits