

# **Food borne Illness Epidemiological Aspects**

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**Surveillance is the first  
step towards prevention**

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# Foodborne Illness



# Investigation

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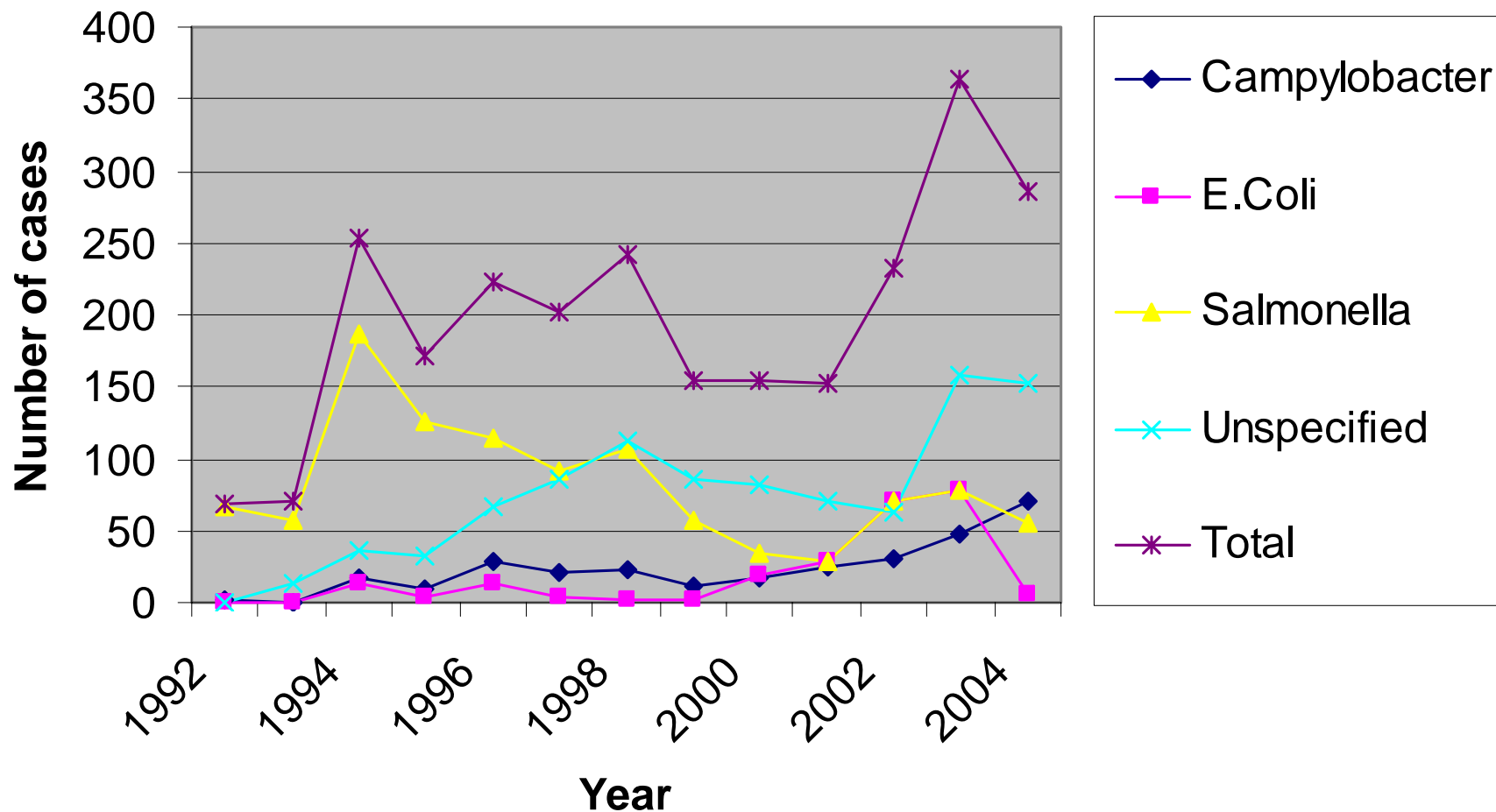
- Clinical symptoms
- Stool culture analysis
- Household cases
  - Advice
  - Leaflet
- Catering establishments
  - Inspections
  - Sampling of food/environmental samples
  - Follow up
  - Communication with veterinary services

# Aetiological Agents

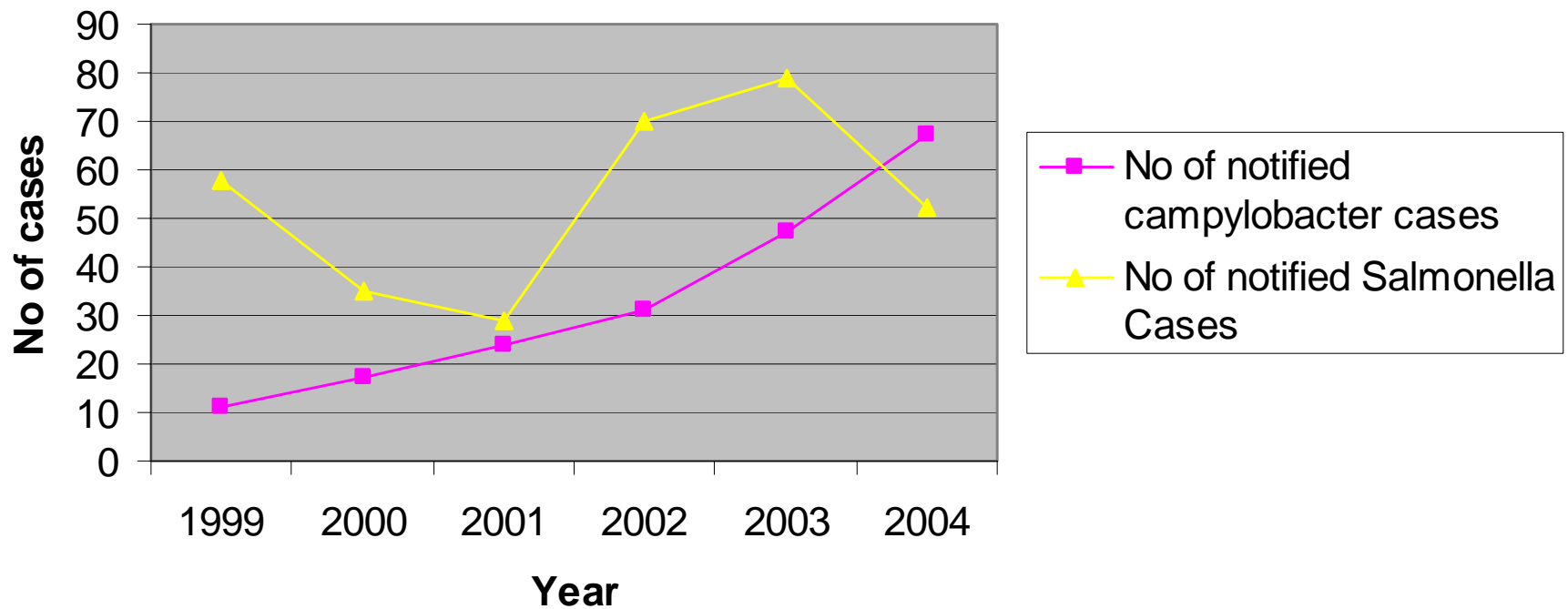
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- Campylobacter
- Salmonella
- E.Coli
- Shigella
- Cryptosporidiosis
- Giardia
- Scombrototoxic
- Viral

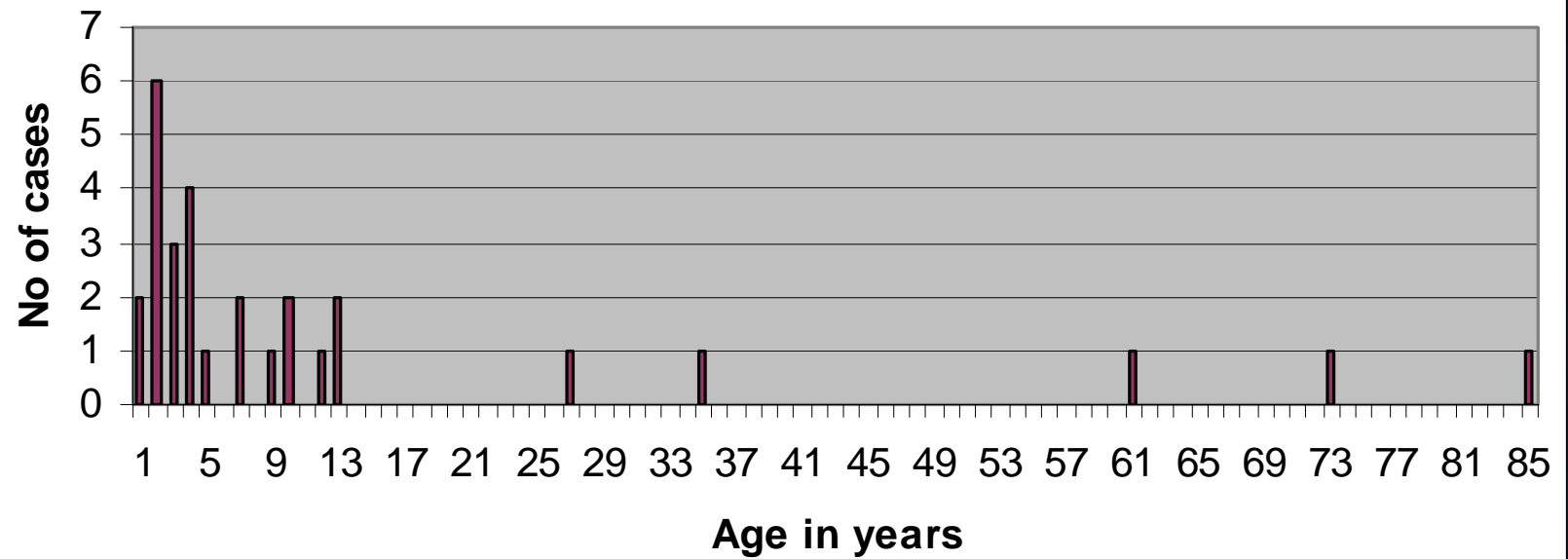
## Trends of sporadic foodborne illness, Malta 1992-2004



### Notified cases of Campylobacter and Salmonella 1999-2004



## No of Campylobacter cases per age for Jan- 25th April 2005



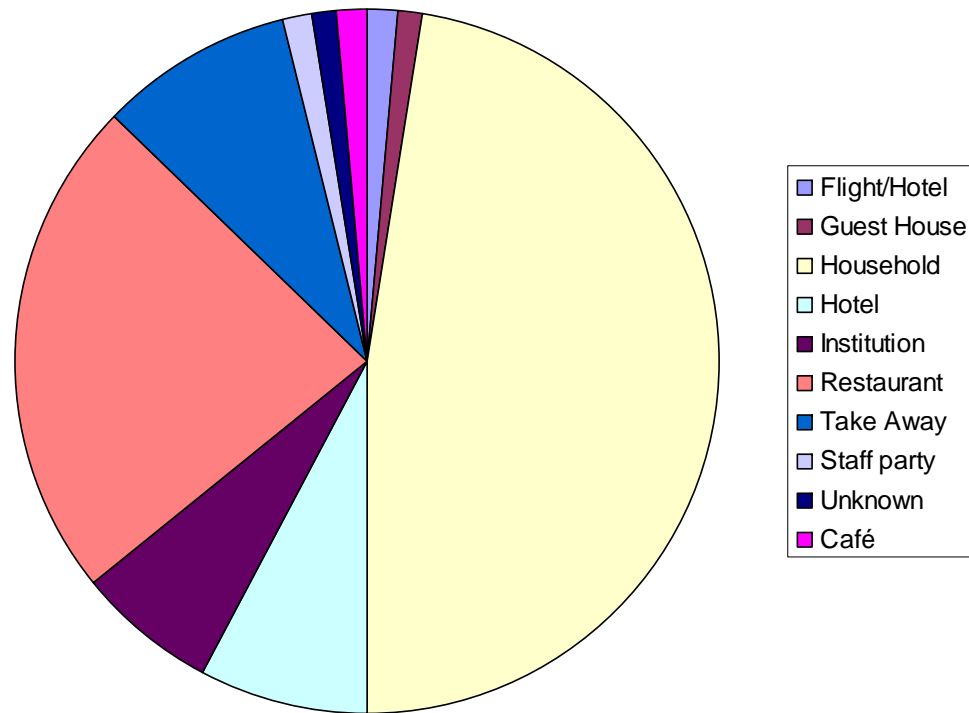
# Upsurge in campylobacter

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- Case control study of cases in 2005
- Sporadic cases
- Two controls per case
- Questionnaire
- Analysis by Epi Info 2000
- Identification of risk agents

# Sources of food borne illness

Source of Foodborne Illness Outbreaks notified during 2004



# Norovirus Outbreak in France

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- Gastrointestinal Illness
- Students attending school restaurant
- Haute Loire district
- 30 teachers and 334 students (289 take lunch at restaurant)
- Case defined: student or teacher with diarrhoea or vomiting since 21<sup>st</sup> March

- Out of 270 students interviewed 75 (28%) met case definition
  - 92% abdominal pain
  - 79% vomiting
  - 53% nausea
  - 51% diarrhoea
  - 15% fever

- No hospitalisations
- All recovered
- Range of illness 1-2 days
- Incubation period 12- 56 hrs, median 37hrs

- Statistically significant association with dessert of raspberries with fromage blanc
- RR 3.3 (95% CI 1.5-7.5)
- Reported by 75% of cases

- Stool specimen analysis
- 5 out of 6 tested positive for Norovirus genogroup I Genotype 5
- Analysis of raspberries was negative
- Epidemiological analysis suggestive of contamination of raspberries by Norovirus

# Salmonella Outbreak in Malta

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- Notification of a no of gastroenteritis cases
- Attended wedding
- Cohort study
- 108 reception attendees questioned using questionnaire
  - Clinical details
  - Food items available

- Case definition: Any party attendee developing vomiting and or diarrhoea following reception
- 54 cases identified
- Analysis by EpiInfo 2000

- Statistically significant associations with:
  - Shrimp boats
  - Buffet counter
  - Octopus in garlic
  - Salmon bridge
  - Salmon paupiettes
- And the development of symptoms

- Inspection at caterer, wedding hall
- Sampling of food and environmental samples
- Analysed at PHL
- No salmonella was isolated from samples from caterer but found in left over foods
- Stool cultures of patients
- Salmonella enteritidis

# Undernotification

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- Problem with all communicable diseases
- Especially with GE
- Cross sectional pilot study carried out in 2003 estimated that 5 % of population suffer from infectious intestinal illness
- Main study to analyse aetiological agents underway

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