

# Brucellosis outbreak in Greece

Ioannis Karagiannis, HCDCP

3rd EPISOUTH Training Module  
15-19 June 2009, Madrid

# Brucellosis

- Zoonosis
- *Brucella melitensis*
- Unpasteurised milk or milk products
- Incubation period 5-60 days
- Symptoms in human
  - arthralgia
  - sweating
  - fever
  - headache

# Brucellosis in Greece

- 149-337 human cases per year
  - mostly in high risk professions
- Never more than 6 cases per year in the Kavála prefecture
- Most islands enjoy a brucellosis eradication status

# The event

- 16 May 2008: 7 cases of brucellosis are notified to HCDCP
  - Local public health (PH) authorities were aware and would investigate
- 20 May 2008: fresh cheese consumption had been reported by many cases
- 22 May 2008: visits from the local PH authorities to investigate circulation of cheese

# A religious interlude

- Orthodox Easter: 27 April 2008 (end of w17)
- Fast throughout Lent, stricter in Easter week
- Local production of fresh cheese to be consumed as of Easter Sunday in Thásos

# Central actions

- Communication to the international community (EuroSurveillance)
- Description of the cases in time, place and person (active surveillance)
- Design of an analytical epidemiological study (case-control study) in order to
  - Find the vehicle of the outbreak
  - Prevent future outbreaks
  - Save the world from brucellosis!

# The continuation - Challenges

- Multidisciplinary approach
  - Case finding – ongoing outbreak?
  - Controls for the case-control study
    - “convenience sample” was used
  - Environmental investigation

# Challenges (I)

- Case finding – ongoing outbreak?
  - Long incubation period
  - Hospitals, health centres, GPs
  - Tourists having traveled in the area



# Challenges (II)

- Environmental investigation
  - Isolation of *B. melitensis* in
    - Cheese
    - Ruminants
  - Withdrawal of any cheese residuals
  - Teach the producers

# All in all...

- Prefecture of Kavála
  - PH authority
  - Vet authority
- Clinicians
  - GPs
  - Health centres
  - Hospitals (wards, outpatient clinics)
- Labs
- HCDCP

# Looking back in 2008

- First response and communication was timely
- Faster international communication
- Better choice of controls
- Set a head of the outbreak investigation
  - Though always a sensitive issue
- Faster analysis of study data

# Always a learning procedure

- Natural experiment
  - Meant to expose all difficulties
- Challenges are “built-in”
- See it as a challenge to win

Thank you 😊