

Enterohaemorrhagic *E.coli*
(EHEC)
in South East Ireland
2003-2009

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EHEC

- Notifiable disease
- Acute diarrhoeal illness
- Incubation 2-10 days
- Can be complicated by haemorrhagic colitis and haemolytic uraemic syndrome (HUS)
- Death rate for HUS 3%-5%



Transmission

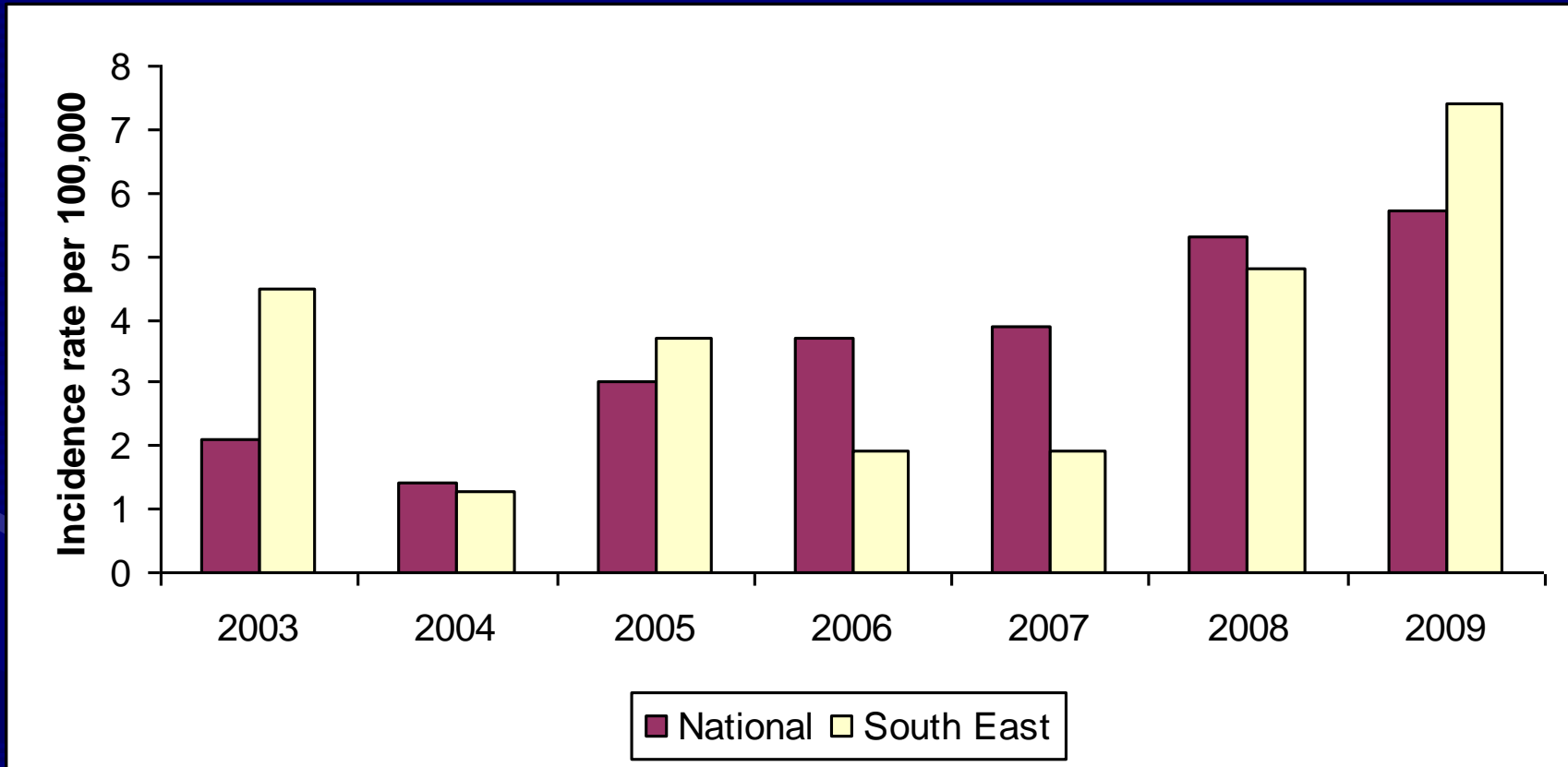
Small infective dose (10 organisms)

- Cattle primary reservoir
- Contaminated food and water
- Environment
- Animal contact
- Person to person spread

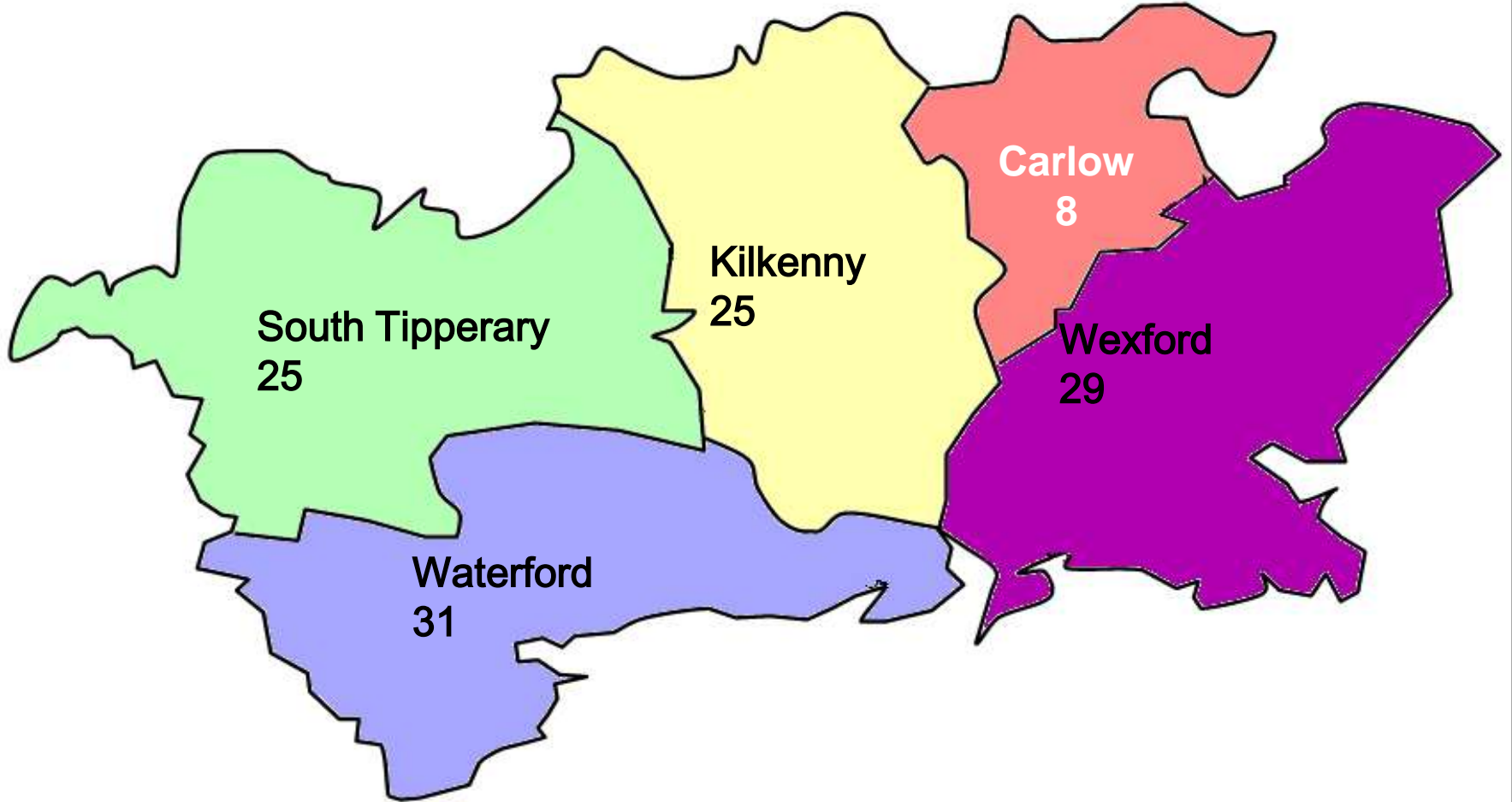
Study

- Incidence of lab confirmed cases
- LHO distribution
- Month of onset
- Severity of illness
- Serogroup and Phage typing
- Suspected mode of transmission
- Contact tracing

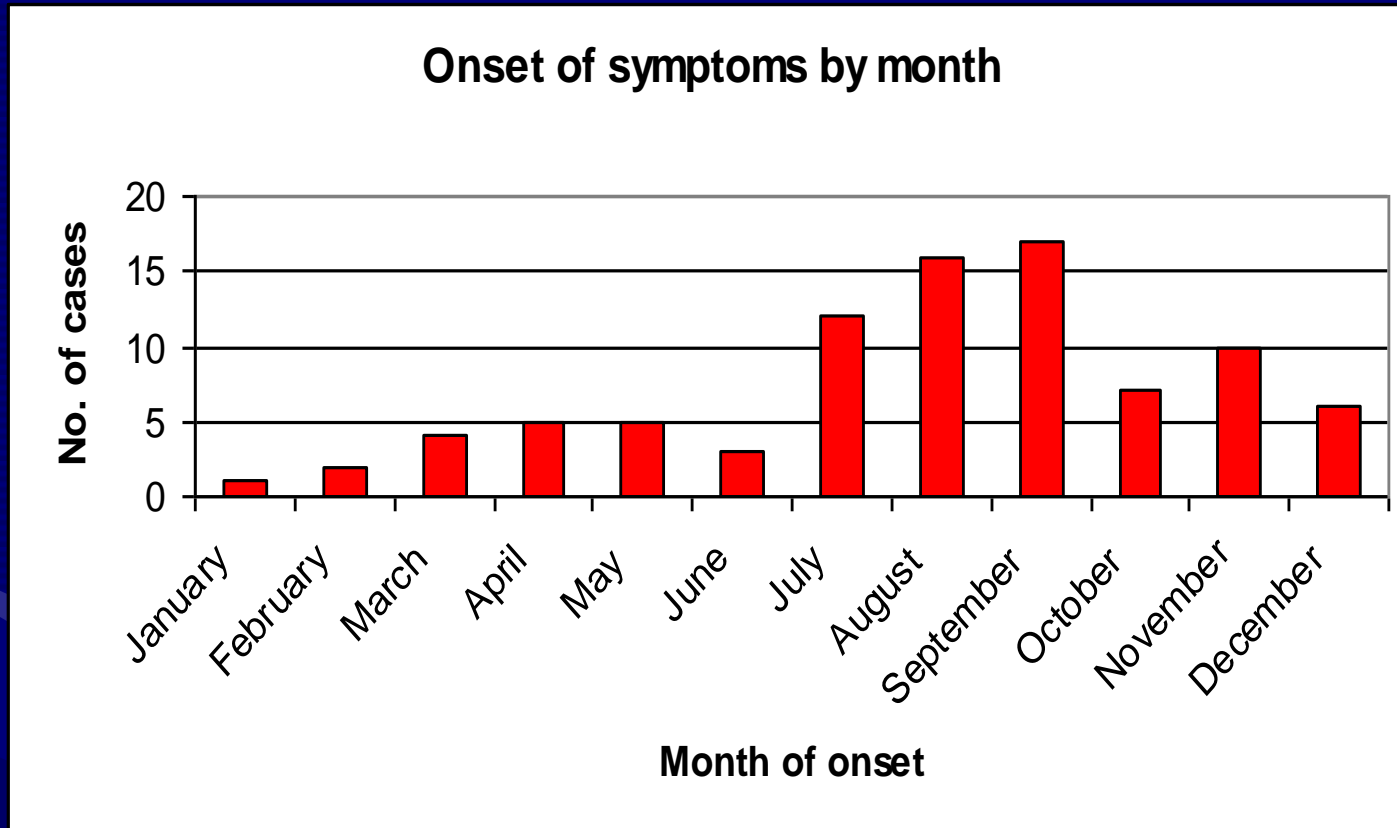
Crude Incidence Lab Confirmed Rates per 100,000 pop.



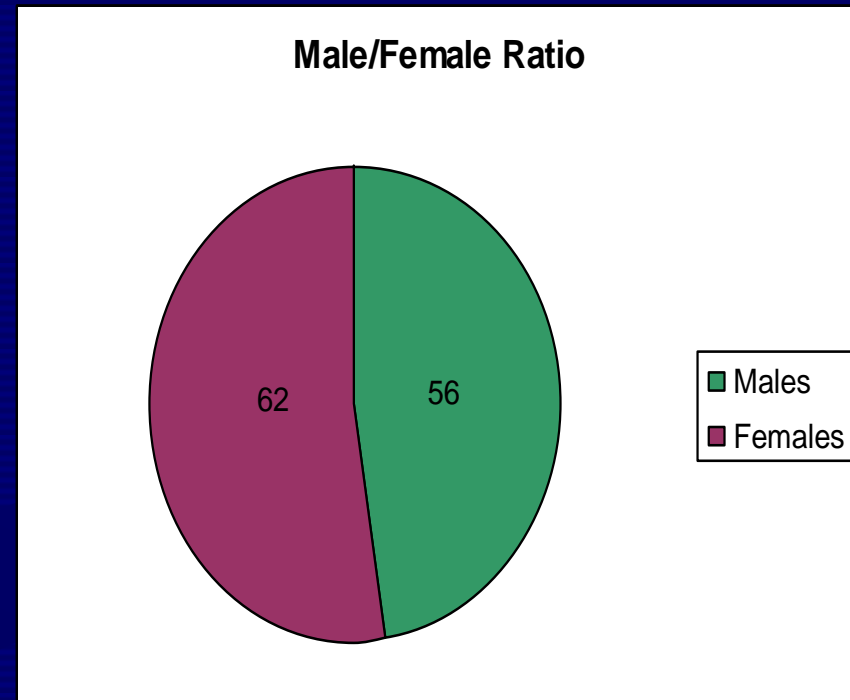
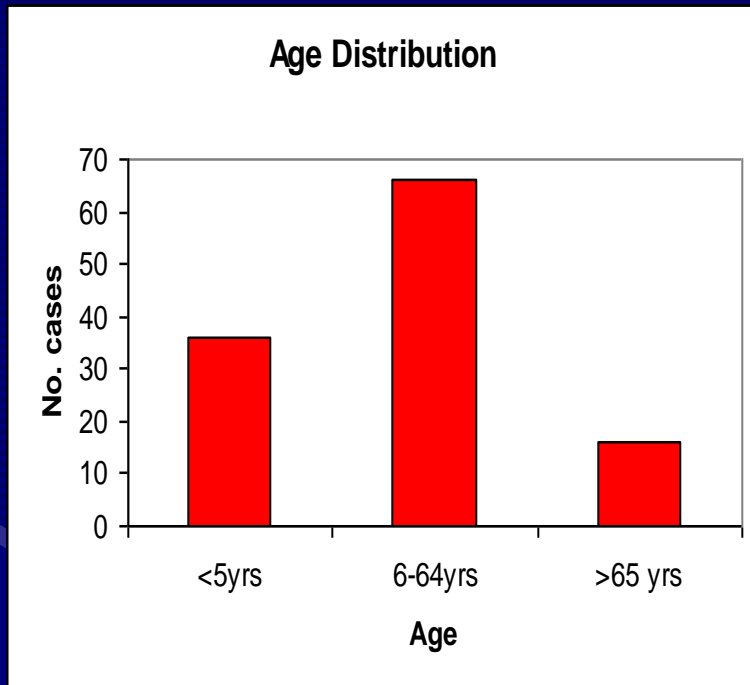
118 cases lab confirmed between 2003 and 2009



Seasonal Distribution



Age/Sex distribution



Serogroup and Phage typing

- Serogroups O157, O26, O5, O145
- Within O157 there were 10 phage types identified. Phage type 32 being the most dominant (45%)

Symptoms

Of the 118 cases

- 89 (75%) symptomatic
- 51 (42%) hospitalised
- 41 (35%) bloody diarrhoea
- 13 (11%) HUS

HUS

- HUS tends to appear 2-14 days after onset of diarrhoea
- Children and elderly at greatest risk
- Between 2003-2009, nationally 8% progressed to HUS
- 6 (6%) O157 developed HUS
- 4 (40%) O26 developed HUS
- All 3 cases of O145 and O5 developed HUS

Suspected mode of transmission

- Private wells 42%
- Person to person 32%
- Farm 27%
- Food 20%
- Travel 20%
- Unknown 13%

Water results

- Water testing of the cases who consumed water from a private well
 - 1 well had *Ecoli*
 - 32 wells had coliforms
 - 13 wells were negative

Risk Groups

- Group 1: Food handlers
- Group 2: HCW, preschool nursery staff
- Group 3: <5yrs attending nursery etc
- Group 4: Older children and adults unable to implement good hygiene
- Group 5: No identifiable risk

Screening

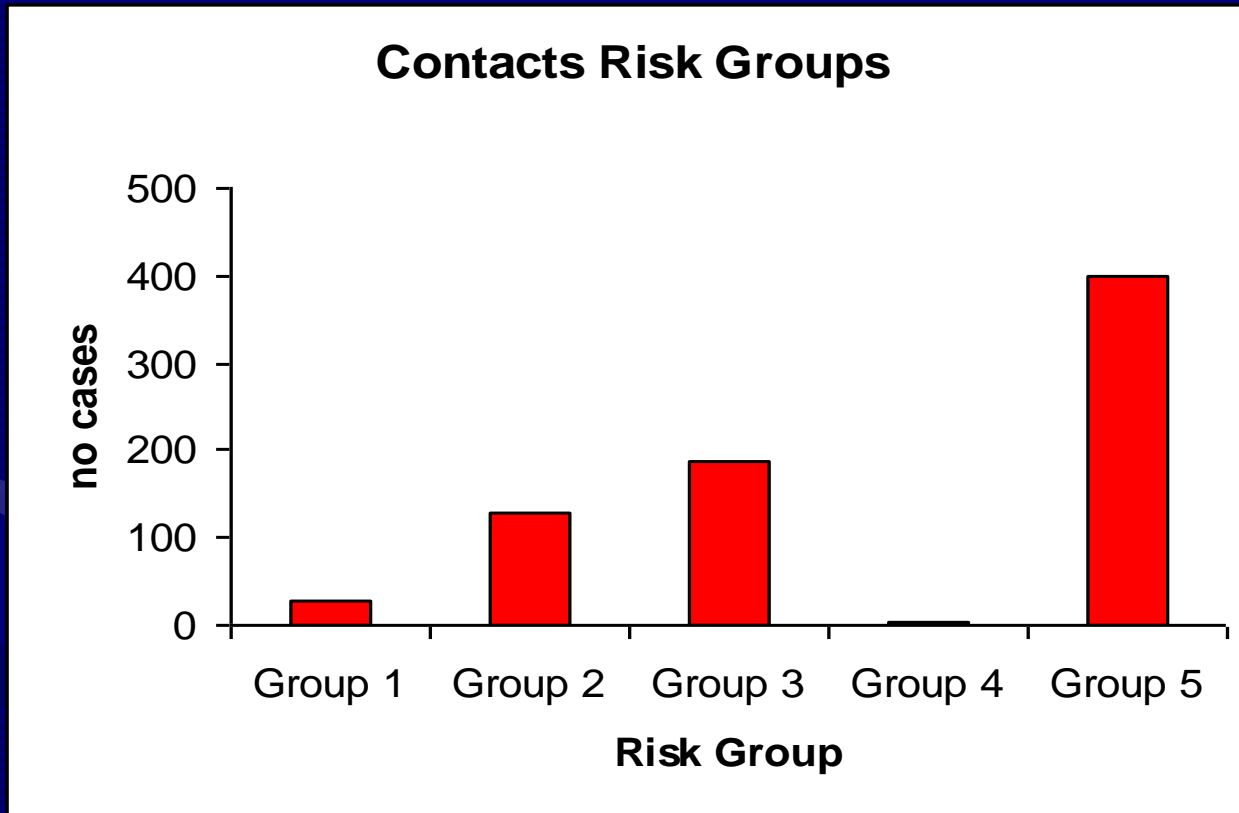
Screening

- Household contacts
- Close contacts – based on risk assessment

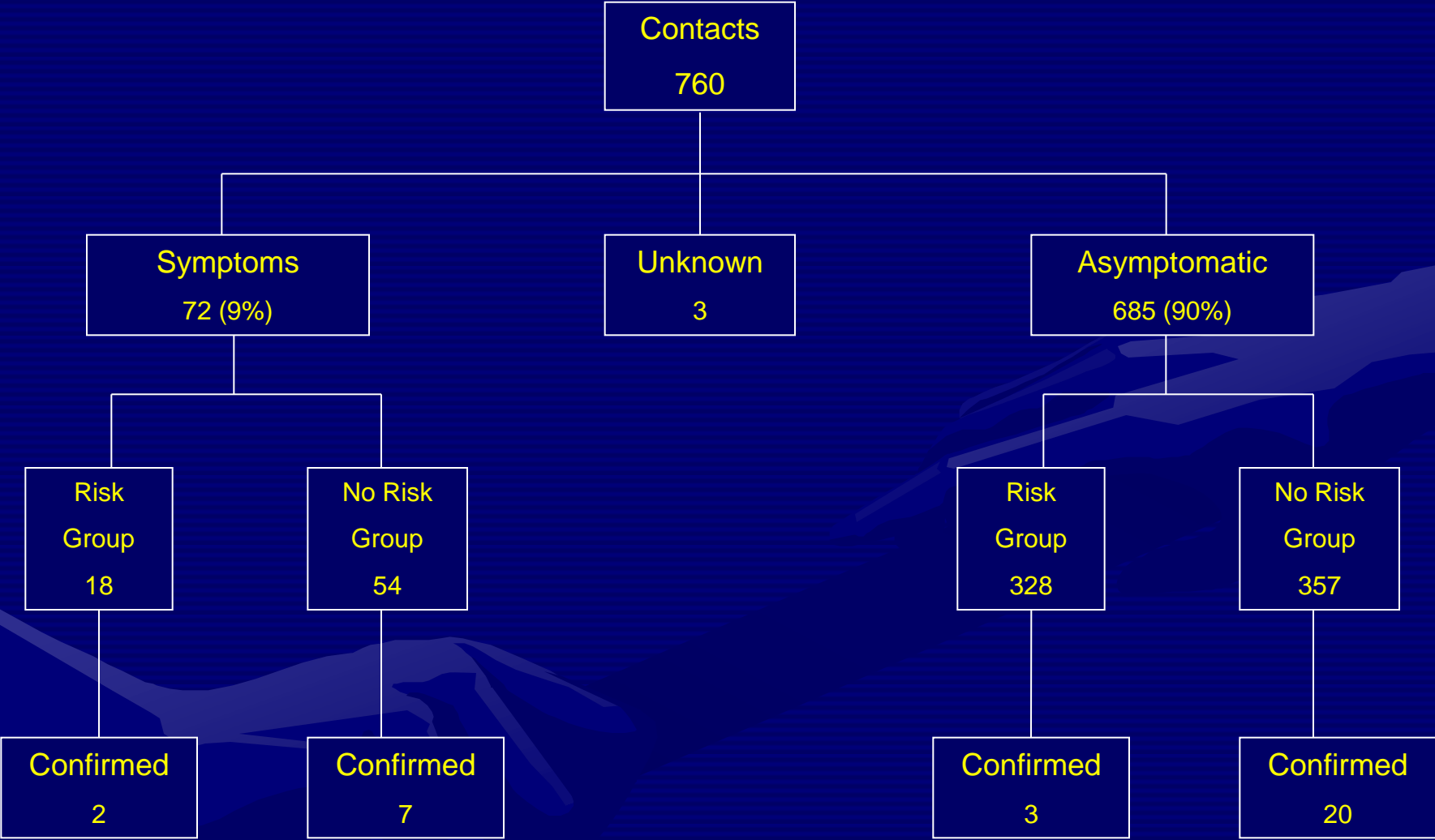
Clearance is required for any contact identified in a high risk group

Contacts

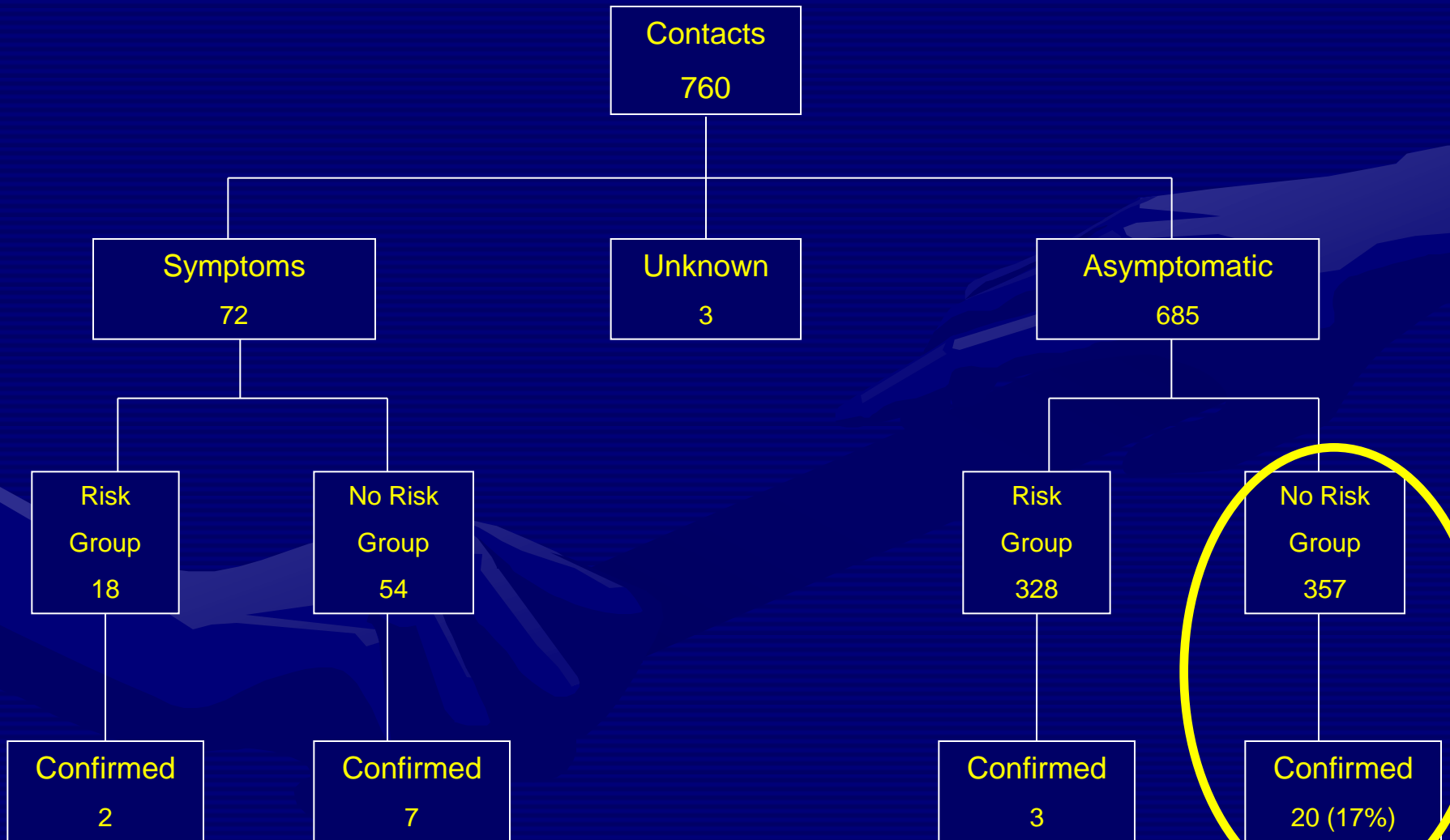
- 760 of which 72 symptomatic
- 348 in risk group 1-4



Contacts 2003-2009



Conclusion



Acknowledgements

- I would like to thank the staff of Public Health Department in assisting with producing this study

References

- Screening Policies for Daycare Attendees Gilbert,M et al 2005. Canadian Journal of Public Health July-August 2008
- Epidemiology of Verotoxigenic *E.coli* on Ireland 2009. Epi-Insight Vol11, issue 9 September 2010
- Report of the HPSC Sub-Committee on Verotoxigenic *E.coli* February 2005
- www.hpsc.ie