INFLUENZA SURVEILLANCE DURING A PANDEMIC

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Surveillance Unit

A Working Group set up

- WG set up by ECDC in 2006
- First meeting WG, 15-17 January 2006
- Uppsala Workshop, May 2006
- Second meeting WG, 3-4 May 2007

Background considerations

- Requirements of surveillance during a pandemic will be greater than during a normal influenza season
- Expectations will run ahead of what can be delivered
- Many conventional influenza surveillance systems will be compromised

First WG meeting, January 2006

- Set of surveillance objectives and needs during an influenza pandemic
- Objectives proposed for the different WHO pandemic phases and EU alert levels
- Revision of which surveillance systems can cover each objective
- Some areas for further development were identified
- First draft paper

Second WG meeting, May 2007

Focus on what?

- Phase 6
- What surveillance activities and outputs should be expected of all EU and EEA countries
- What can be done by a few countries or at an EU level

Second draft paper

- Resource for EU countries and ECDC to identify surveillance activities for a pandemic and to guide the planning
- To seek agreement on technical developments and data sharing

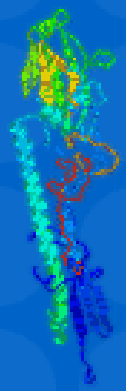
Surveillance objectives in phase 6

1	Early detection of pandemic influenza virus activity in European countries
2	Collection of virus isolates
3	Collation of key clinical and epidemiological data on the impact of the pandemic virus
4	Provision of data for forecasting future levels of activity using real time modelling
5	Evaluation of effectiveness and safety of interventions

1. Early detection of pandemic influenza virus activity in European countries

- Year-round surveillance
- Surveillance of outbreaks
- Rapid expert viral testing (CNRL and NICs)

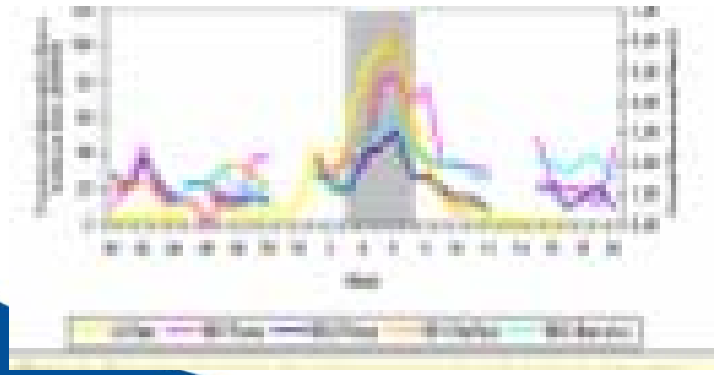
Year-round surveillance, inter-season Electronic Bulletin

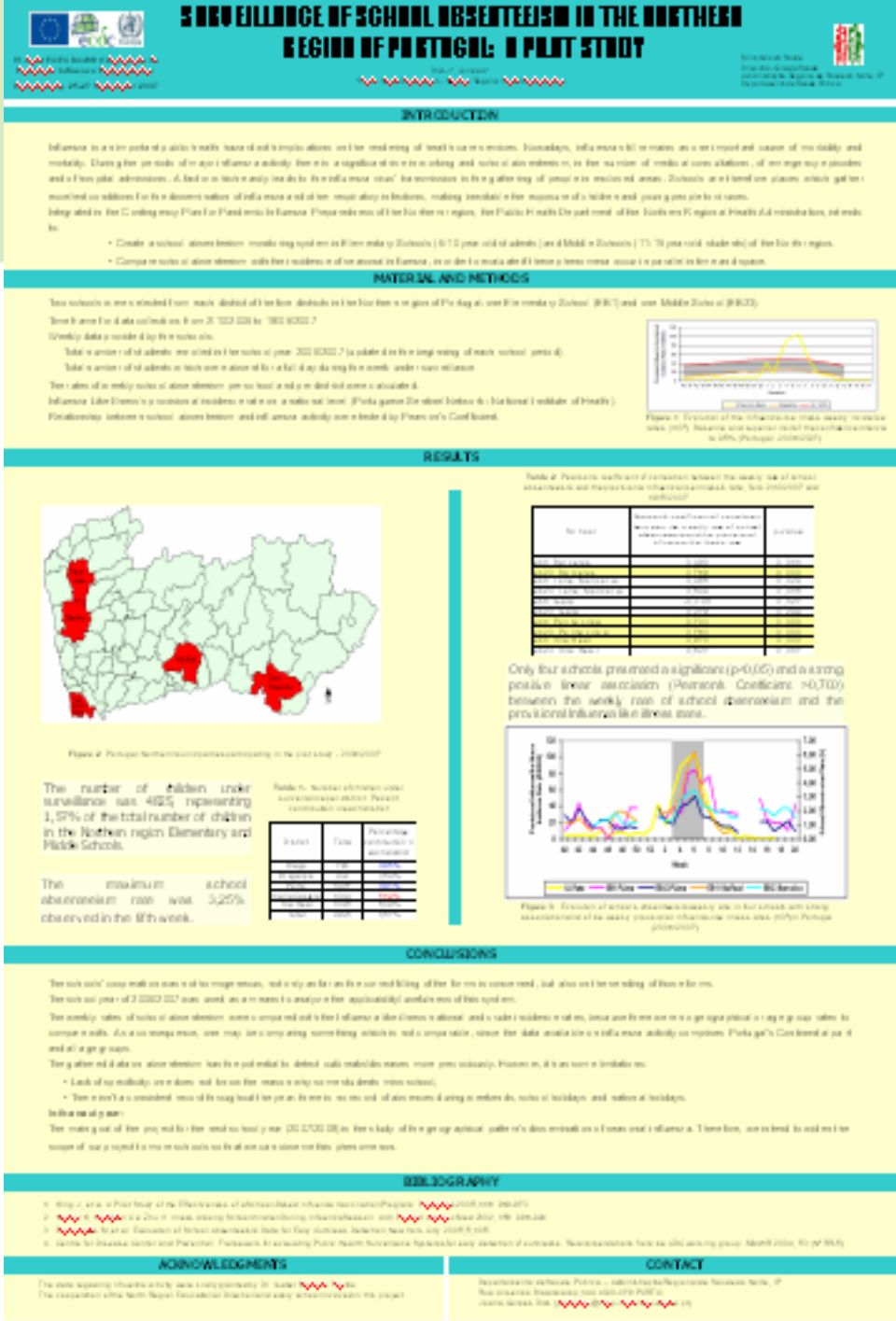


European Influenza Surveillance Scheme

- Published since week 23/2006 (N=18)
- Published every two weeks
- Only VIROLOGICAL data is included in the Bulletin
- Reporting completeness needs to be improved (e.g. only 12 (41%) countries reported 5 or more weeks of data in 2006)

Outbreak surveillance





SURVEILLANCE OF SCHOOL ABSENTEEISM IN THE NORTHERN REGION OF PORTUGAL: A PILOT STUDY

INTRODUCTION

MATERIAL AND METHODS

RESULTS

The number of children under surveillance was 4825, representing 1,57% of the total number of children in the Northen region Elementary and Middle Schools.

The maximum school absenteeism rate was 3,25% observed in the fifth week.

Only four schools presented a significant ($p<0,05$) and a strong positive linear association (Pearson's Coefficient >0,700) between the weekly rate of school absenteeism and the provisional influenza-like illness rates.

CONCLUSIONS

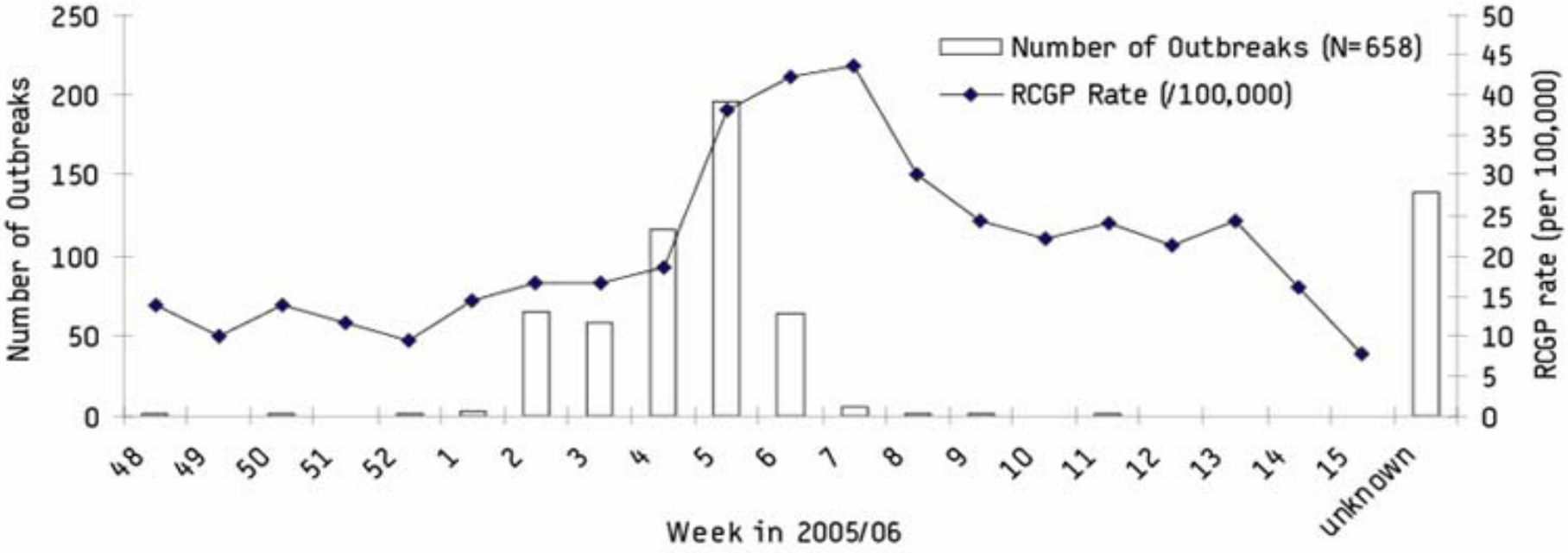
BIBLIOGRAPHY

ACKNOWLEDGMENTS

CONTACT

FIGURE 2A

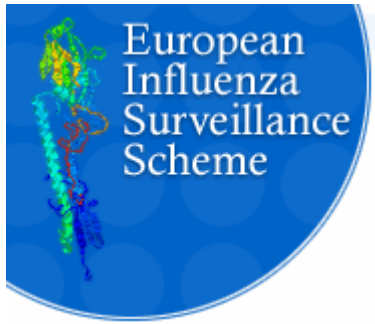
Comparison of RCGP* rate with distribution of outbreaks in England and Wales influenza season 2005/06

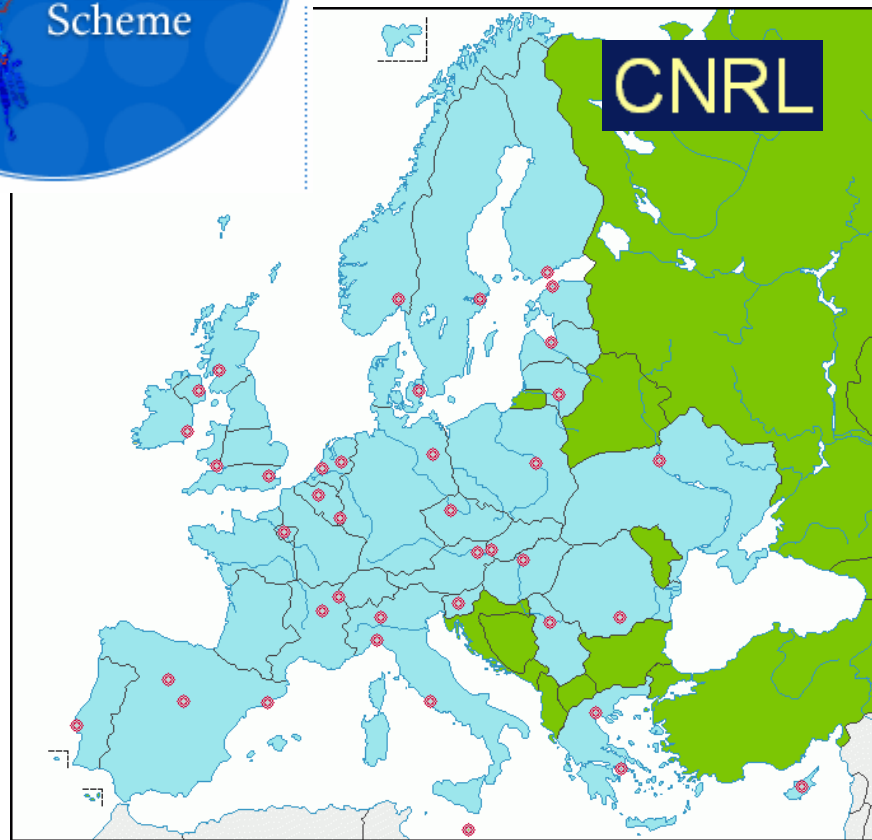


Zhao H, Joseph C, Phin N, . Outbreaks of influenza and influenza-like illness in schools in England and Wales, 2005/06. Euro Surveill 2007;12(5)[Epub ahead of print]. Available online: http://www.eurosurveillance.org/em/v12n05/1205-222.asp

2. Collection of virus isolates

- Development/refinement of diagnostics
- Genotypic characterisation and assessment of evolution
- Vaccine development
- Antiviral susceptibility





3. Collation of key clinical and epidemiological data on the impact of the pandemic virus

- Assess clinical severity
- Case fatality and health care needs
- Assess epidemiological parameters of transmission including Ro and age distribution
- Assess occurrence of complications including bacterial super-infection and antibiotic resistance

Investigation of first few hundred cases, UK approach

Patient Details	UK Travel Exposure	Overseas Exposure
Animal Exposure	Occupational Exposure	Human Exposure
Case Number: 1	Save	Cancel

Case Owner: Yorkshire (South) [EUELC\AVL4JJ]

Cfl Lab Number	Confirmatory Test	Date of Test	Confirmatory Results	Comments

Report by: Country
Time modality: Date of onset
Period: September 2006

For PCT report:
PCTs in SHA
to: December 2006

Limit records to:
Country
Region
SHA/Health Board
PCT
Sex: Male
Age band: 45 to 64
Diagnostic status: Confirmed: clinical case
Clinical status

Submit | Export to Excel

4. Provision of data for nowcasting and forecasting using real time modelling

- Provide information on near future levels of activity, estimates on persons
  - Infected with the pandemic strain
  - Requiring care (hospitalisation, antivirals)
  - Dying
- Adjusting for
  - Assumptions about the behaviour of the new pandemic strain
  - Available surveillance and monitoring data

5. Evaluation of effectiveness and safety of interventions

- Antivirals
- Vaccines (pre-pandemic and pandemic specific)
- Public health and social distancing measures

Suggested Developments (Draft work plan 2008)

- Work under the Group to continue
- Agreement on core data to be gathered from first cases and how to do it
- Agreement on share protocols and outputs, through ECDC
- Mechanism for monitoring vaccine effectiveness (ECDC call for tender)
- Protocols for determining and monitoring antiviral effectiveness (ECDC call for tender)
- Project on the interface between real time modelling and surveillance
- List of minimum requirements for laboratory (WHO) and clinical surveillance for all MS
- More work with WHO, CDC and other partners

WG participants

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Thank you!

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