

United Kingdom H1N1v Pandemic



Surveillance and Epidemiology

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UK Strategy

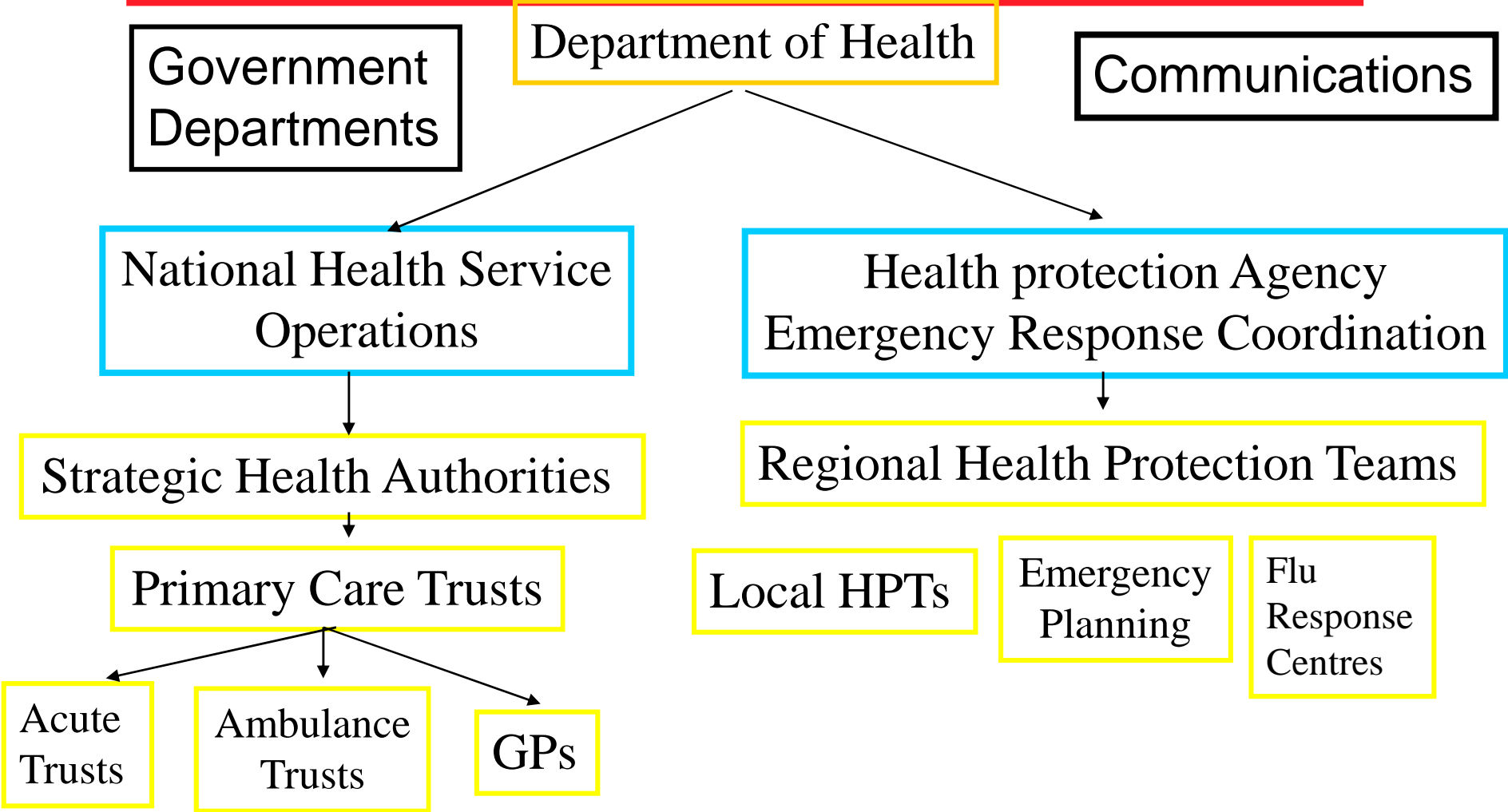


- **Containment Phase (case based surveillance)**
 - Meeting aircraft from Mexico, information for travellers
 - Identification of cases - treatment
 - Identification of close contacts - prophylaxis
 - Closing of affected schools for 7 days
- **Outbreak management (case based surveillance)**
 - No case finding at ports of entry
 - Flexible approach to schools - local risk assessment
 - Clinical diagnosis for contacts of confirmed cases
 - Widespread community transmission areas
- **Treatment Phase (routine winter surveillance)**
 - Clinical diagnosis
 - Treatment available for all (especially risk groups)
 - No contact tracing
 - No prophylaxis except for risk groups

Command and Control in Health



Civil Contingencies Committee



Surveillance Systems



Generic surveillance systems

- National laboratory reporting scheme
- RCGP Weekly Returns Service
- NHS Direct syndromic surveillance
- Mortality monitoring
- Hospital admissions

Seasonal influenza surveillance systems

- QFLU (as a component of Q-Surveillance)
- HPA spotter practice scheme
- HPA Antiviral Resistance Monitoring and Viral Sequencing of Influenza
- Medical Officers of Schools Association

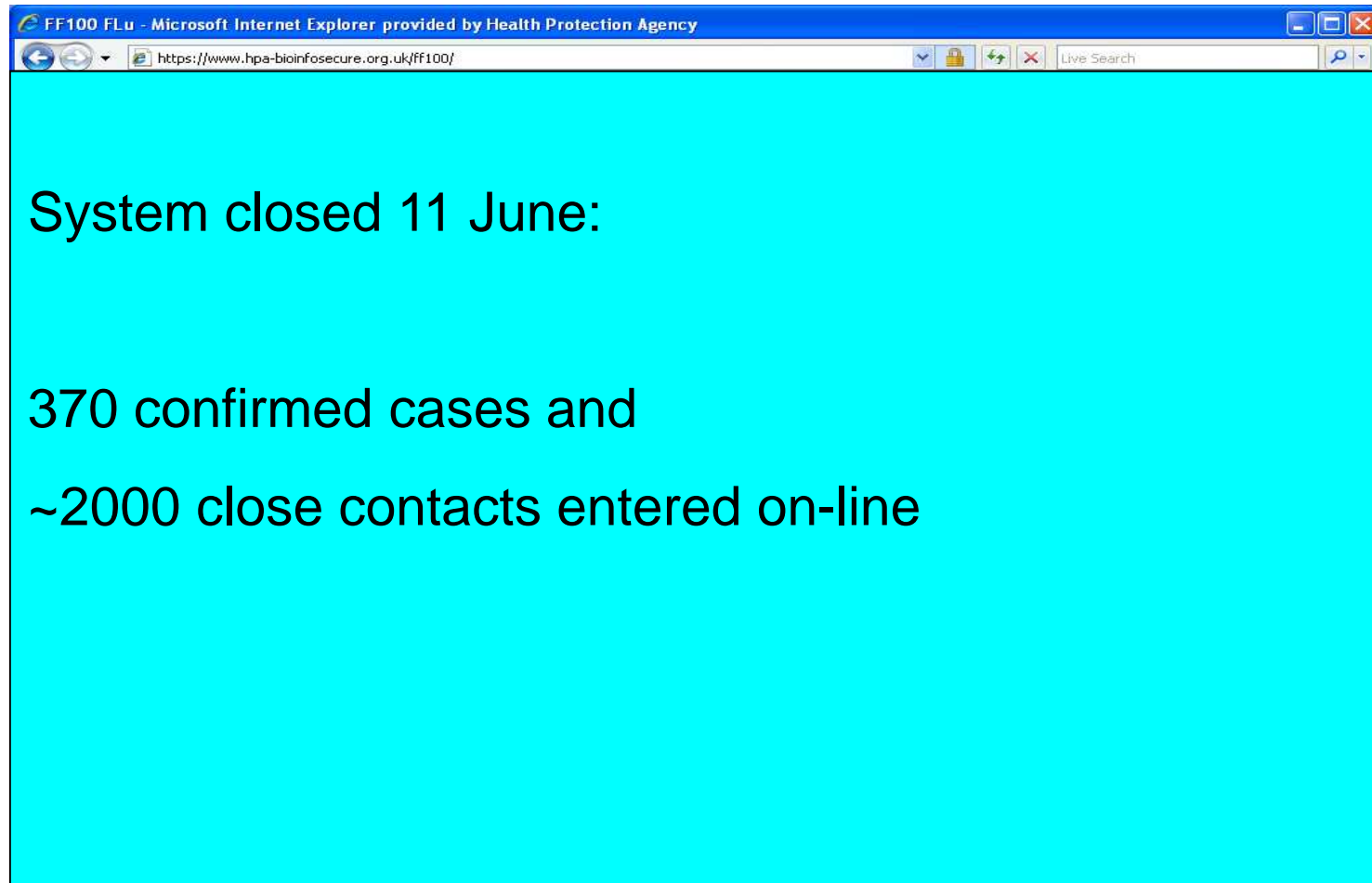
Pandemic Preparedness Systems

- Enhanced Surveillance of H1N1v
- First Few Hundred (FF100) Cases Surveillance System
- Flu Clinical Information Network

First Few-100 (FF100)



ORIGINAL AIM: To provide a comprehensive assessment of the emerging epidemiology, clinical features and virology of new pandemic virus.





FF100 Outcomes

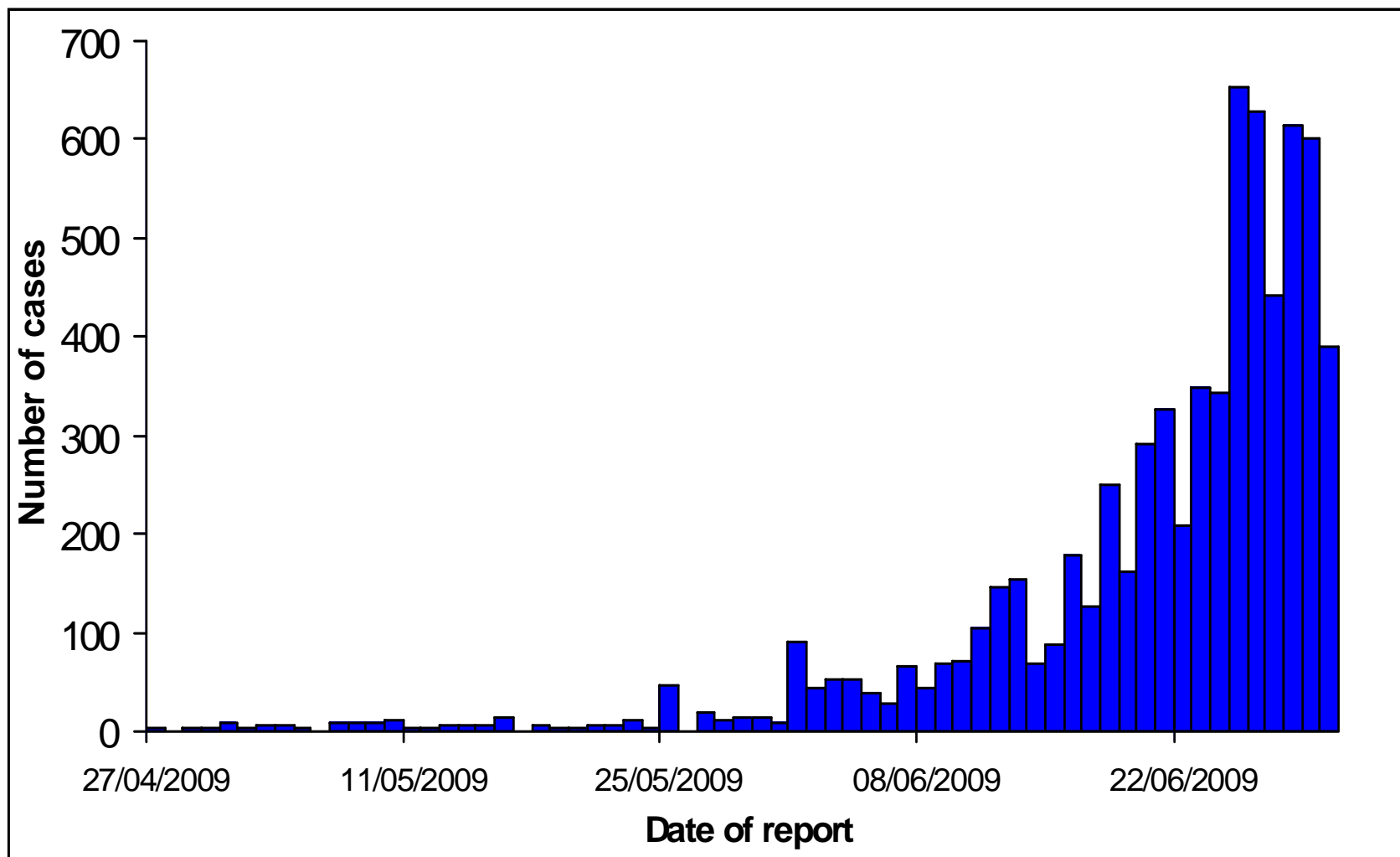
Preliminary household secondary laboratory confirmed attack rates (226 households)

Variable		Contact (excl co- & primary)	Secondary cases	Attack rate	RR	95% CI
Gender	Female	299	16	5.4%	1.0	baseline
	Male	287	25	8.7%	1.6	(0.86, 2.90)
Age group	Adults	521	11	2.1%	1.0	baseline
	Children	179	30	16.8%	6.9	(3.54, 13.59)
Prophylaxis	No	21	12	57.1%	1.0	baseline
	Yes	281	4	1.4%	0.04	(0.01, 0.11)
Total		700	41	5.9%		

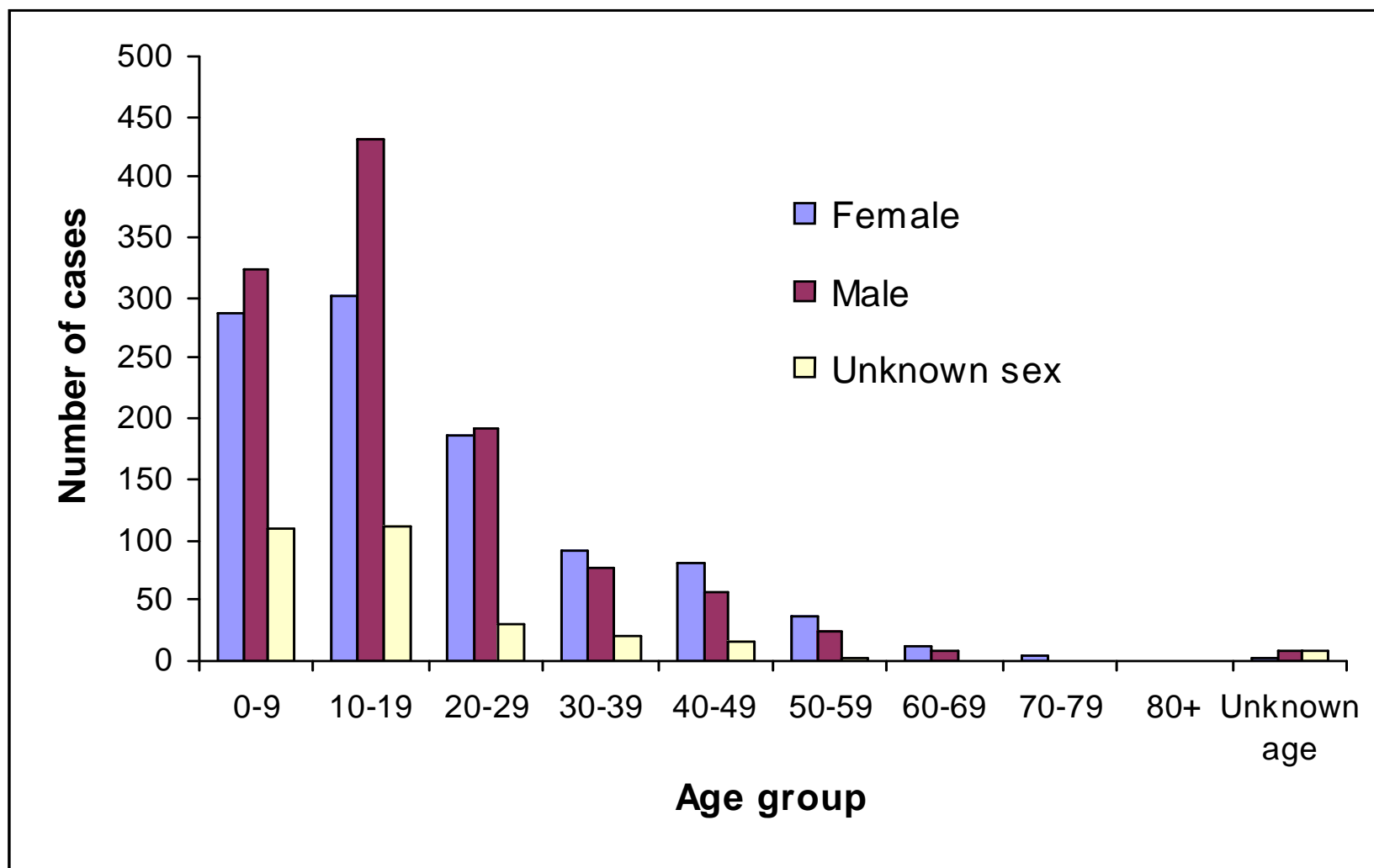
Next steps:

- Complete follow-up of cases and contacts;
- Complete collection and testing of serology from cases and contacts;
- Complete analysis including comparative analysis

UK Epidemic Curve



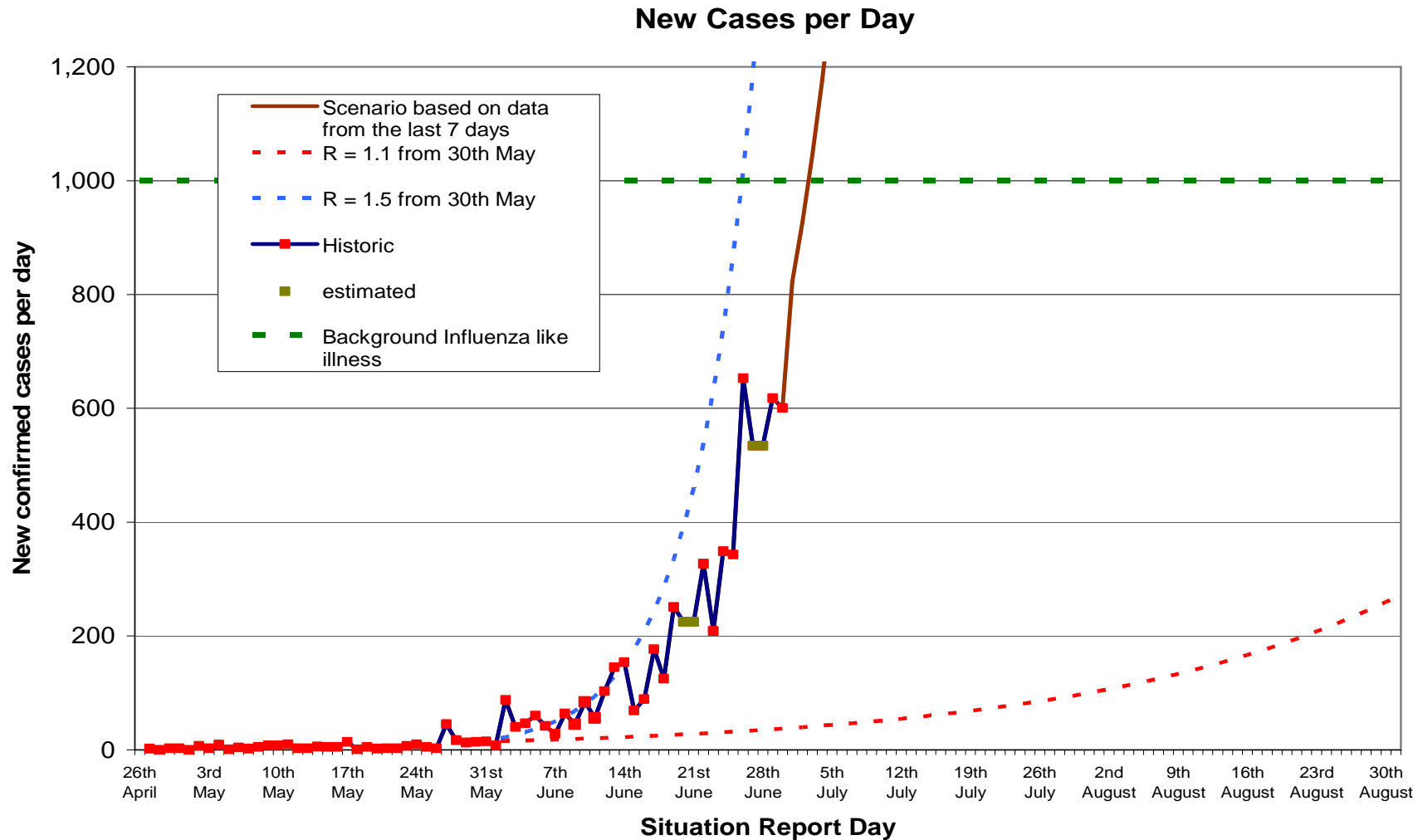
Cases by Age and Sex



Actual and projected new cases per day



Data as at 12.00 on 29 June



Community Based Surveillance

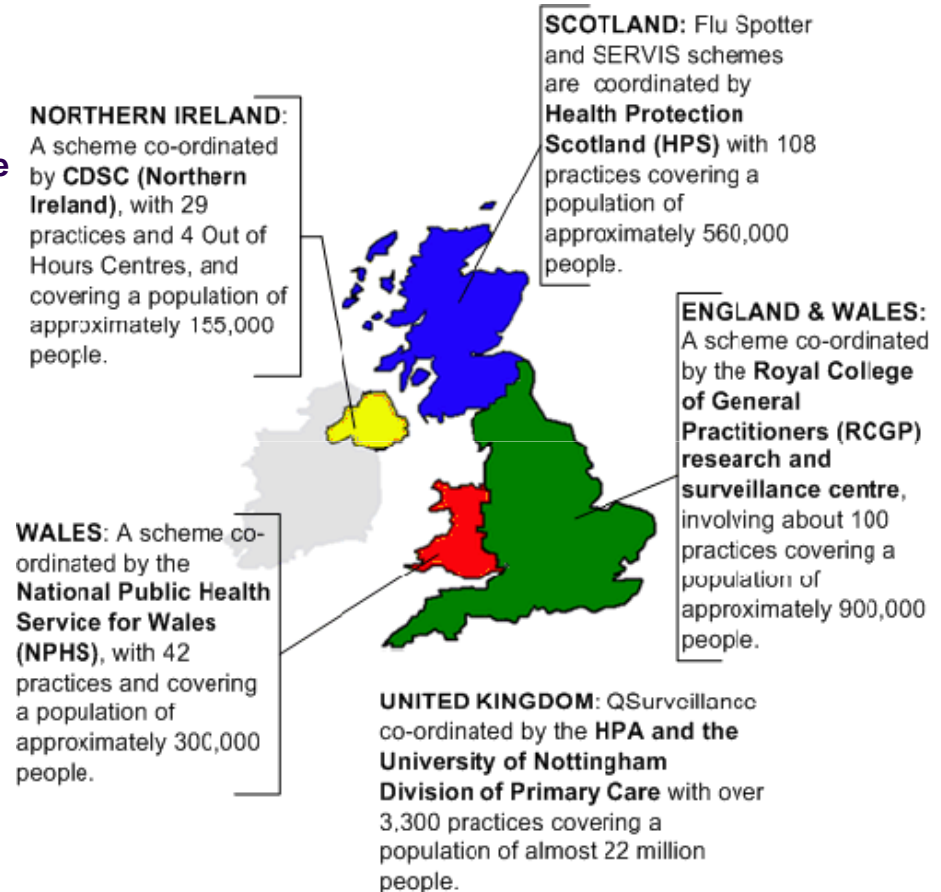


Three community-based virological schemes for detecting sporadic cases of H1N1v are now operating in England.

HPA/RMN scheme – 45 general practices that participate in the HPA/RMN enhanced virological surveillance scheme each winter have agreed to continue swabbing patients with flu-like symptoms from 01/06/2009 onwards. **Results to date 2 positive samples out of at total of 64 tested for H1H1v**

RCGP/HPA scheme includes 45-50 general practices in England that participate in the Royal College of General Practitioner's Weekly Reruns Service run by the Birmingham Research Unit. Samples are tested at Cfl. **Results to date 36 positive samples out of at total of 566 tested for H1H1v**

NHS Direct/HPA scheme - Self-sampling of persons aged 16 or over calling NHS Direct with cold/flu symptoms began on 29 May in six SHAs (London, South East, East and West Midlands, Eastern and North East). Consenting callers are sent packs on Mondays – Thursdays. **Results to date 20 positive samples out of at total of 781 tested for H1H1v**



HPA Website March 09

Across all three schemes a total of 58 cases have tested positive out of a total of 1,611 tested

Challenges for Delivery



- **Increasing numbers of cases per day**
 - Flu Response Centres - 100 staff + telephony systems
 - Data handling system
- **Large numbers of contacts**
 - Flexible approach in areas with widespread community transmission
- **First few hundred cases project**
 - Required 40 staff + telephony system
 - Data handling system

Assumptions for the next few months



To 31 August 2009

- Clinical attack rate 5 - 15%
- Complication rate 15 % of clinical cases
- Hospitalisation rate 3% of clinical cases
- Case fatality rate 0.1% of clinical cases
- Peak absence rate 8 - 9% of workforce

To end 2009

- Clinical attack rate 30%
- Case fatality rate 0.1 - 0.35%
- Peak absence rate 10 - 12% of workforce

Severity and Hospitalisations



- The illness is generally mild but has been severe in a few cases usually those with underlying co-morbidities
- Similar to seasonal flu but all are susceptible
- Total of 105 hospitalisations and 3 deaths
- Currently 14 hospitalisations in England
- 4 without underlying co-morbidities

Surveillance for the next few months



- **Continue syndromic surveillance**
- **Sampling of some cases**
- **Virus monitoring**
- **New surveillance activities**
 - **Calls to National Influenza Service/Fluline**
 - **Antiviral doses issued**
 - **Hospital admissions**
 - **Vaccine uptake (and effectiveness)**
- **Monitoring of bacterial pneumonia and antimicrobial resistance**

Issues



- **Sharing of data and information**
- **Sharing views on policy decisions**
- **Will there be one wave or two?**
- **Is there a seasonality effect?**
- **Southern hemisphere experience**
- **Antiviral resistance**
- **Risk groups**
- **Vaccine prioritisation and efficacy**