

Current Clinical and Epidemiological Picture of Novel Influenza A (H1N1) in the Southern Hemisphere

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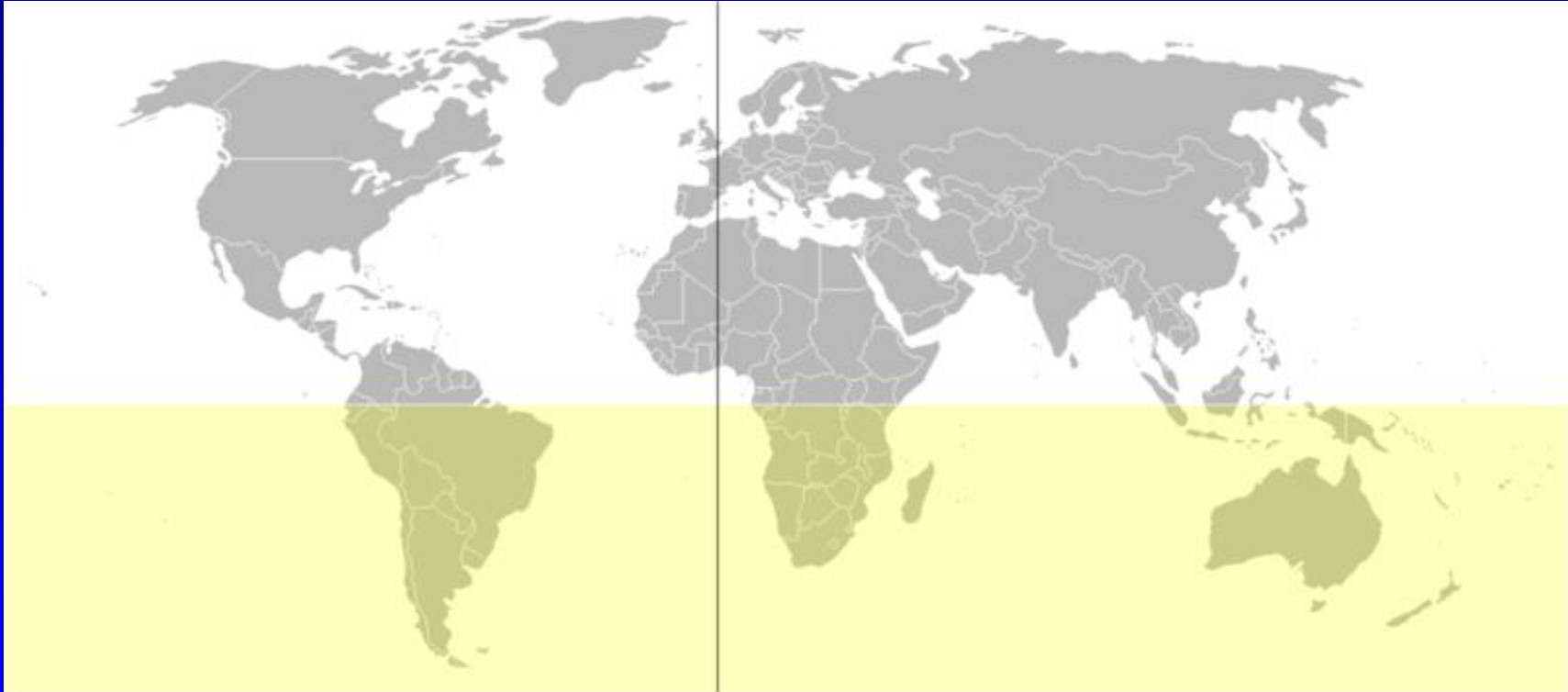
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Southern Hemisphere



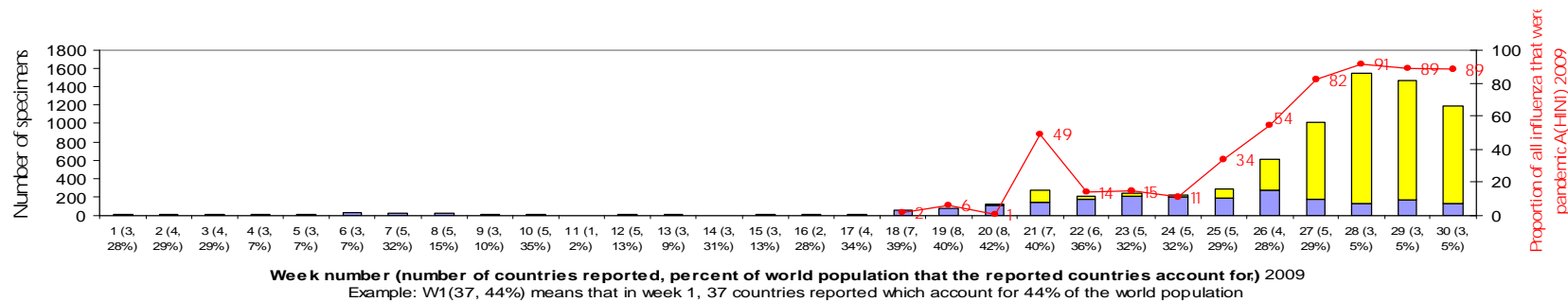
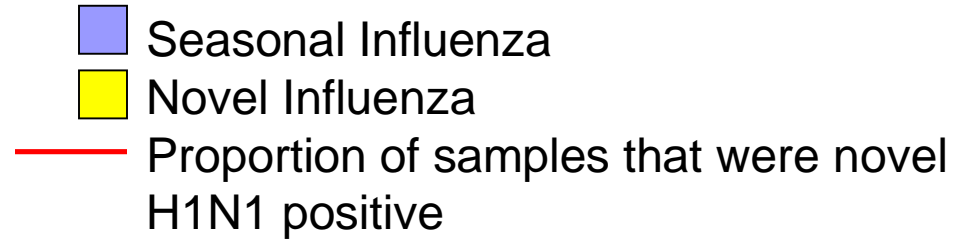
Novel Influenza A (H1N1) Primary Areas of Interest

- Transmission characteristics
- Clinical characteristics
- Burden of the disease and spectrum of illness
- Risk factors associated with severe disease
- Effectiveness of community mitigation interventions
- Mediating impact of seasonal vaccine
- Changes in the antigenic character of the virus

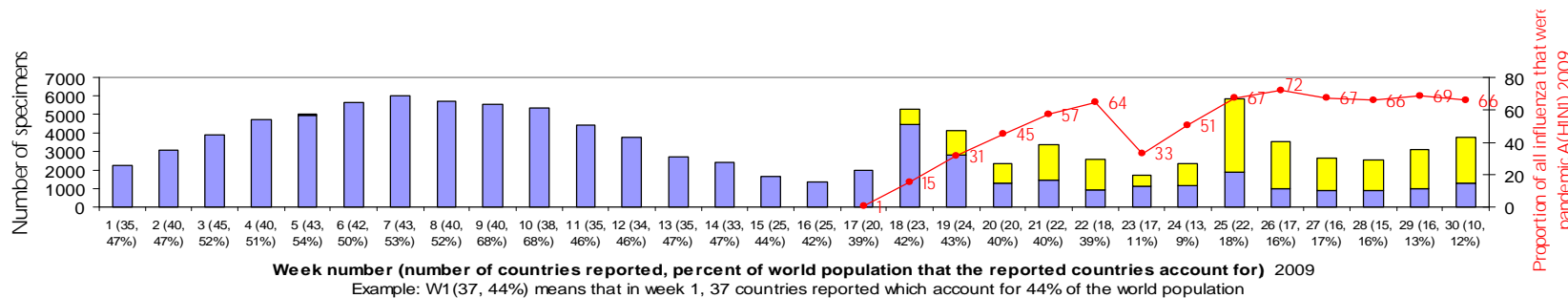


Novel Influenza A (H1N1) has Replaced Other Influenza Subtypes

Southern Hemisphere



Northern Hemisphere



Clinical Summary - Novel Influenza A (H1N1)

- Clinical symptoms
 - Similar to seasonal influenza
 - Similar to what we saw in US in spring
- Underlying diseases among cases that die
 - 67% in US (86% including obesity)
 - 66% in Chile
 - 47% in Argentina
 - 75-80% in Peru
 - Most in Australia



Comparison of Age Distribution of Novel Influenza A (H1N1)

Median Age (in years)

Country	All cases	Deaths
US	12	37
Argentina	18	33
Chile	31	46
Australia	21	51
Peru	15-19	35



Comparison of Severe Illness of Novel Influenza A (H1N1)

Country	Hospitalizations	ICU (% of hosp)	Deaths (Death:Hosp)
US	6506	57 (21%)*	436 (1:15)
Canada	1315	227 (17%)†	60 (1:22)
United Kingdom	576	55 (10%)	36 (1:16)
Chile	1126		104 (1:11)
Australia	428	109 (25%)§	92 (1:5)
Brazil	844		96 (1:9)

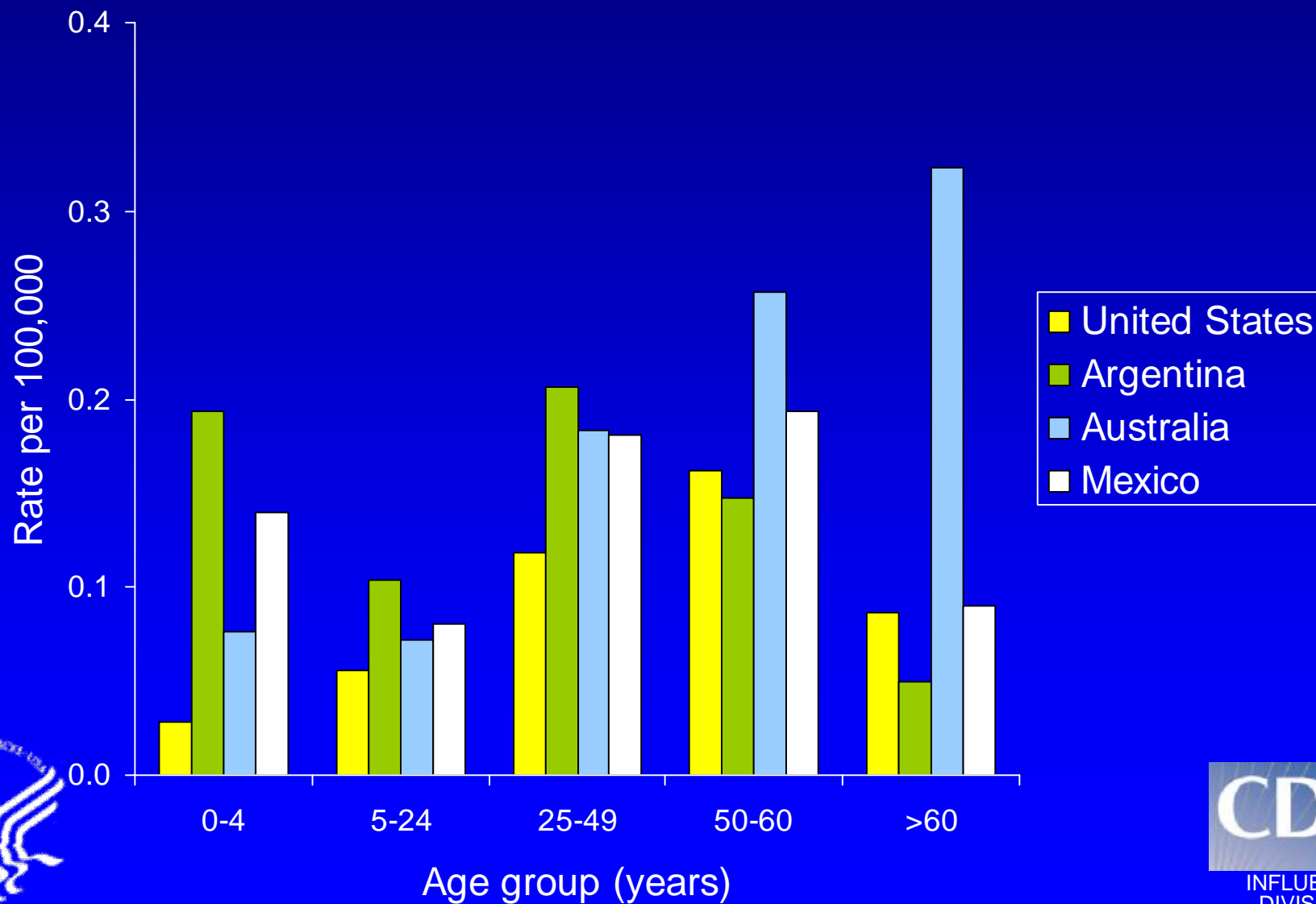
*Among hosp case series of 268 patients

†ICU for England only

§National ICU surveillance



Deaths from Novel Influenza A (H1N1) Most Common in Adults



Genetic Analysis of Southern Hemisphere Viruses

- >1000 genes sequenced from over 260 viruses, including some from Southern Hemisphere
- Hemagglutination Inhibition assay shows no change in antigenicity from those isolated in the Northern Hemisphere
- Chilean isolates are oseltamivir sensitive in functional assay
- Genetic data from Chilean isolates indicate high degree of similarity to previous strains



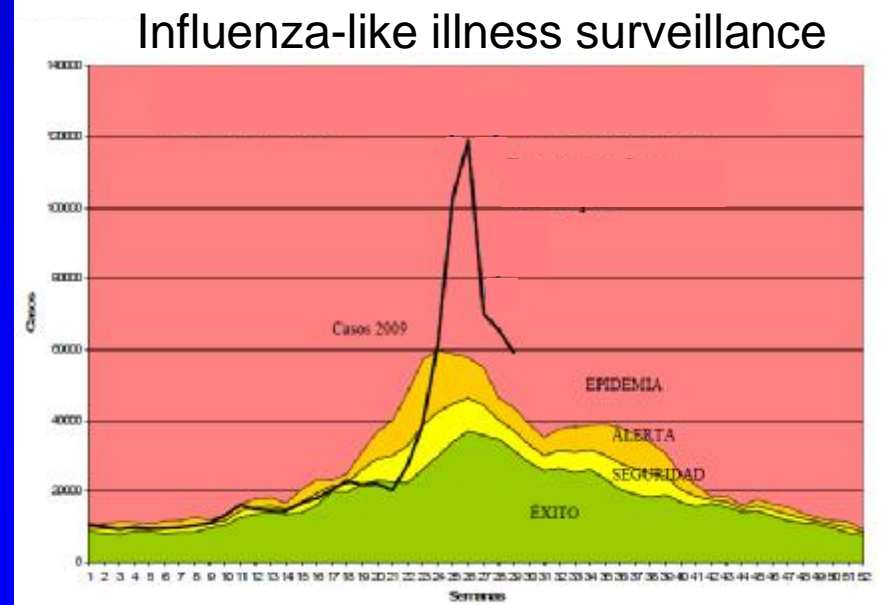
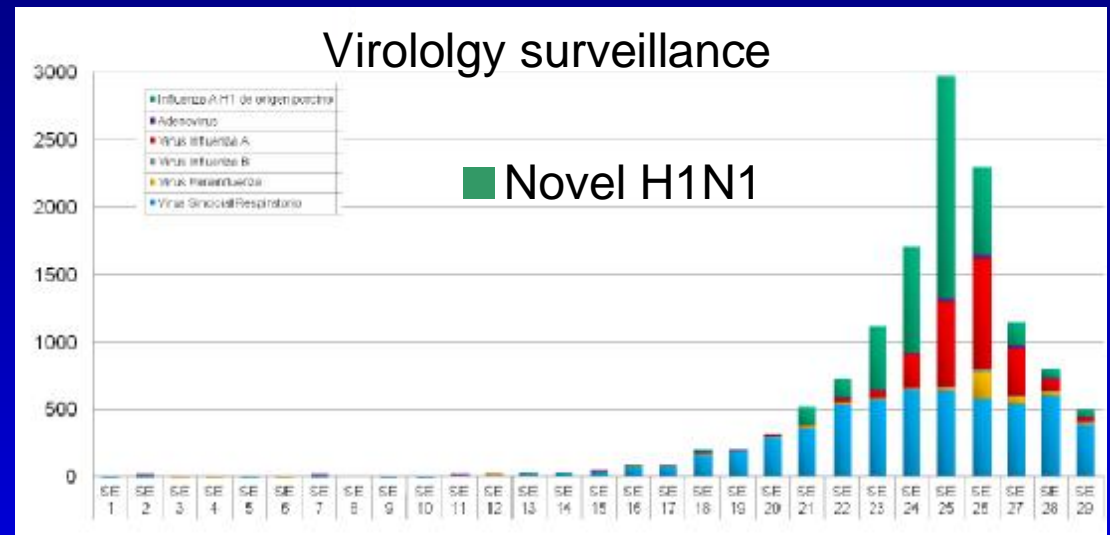
Argentina Experience with Novel H1N1

- Number of suspected cases dropping
- Excess of pneumonias
 - In some areas of the province, but not in others
 - Older children and young adults
- Overall pneumonia hospitalizations increased but not much more that expected for season
- ICU provision (Tucuman)
 - Stretched in public sector
 - No stretched in private sector



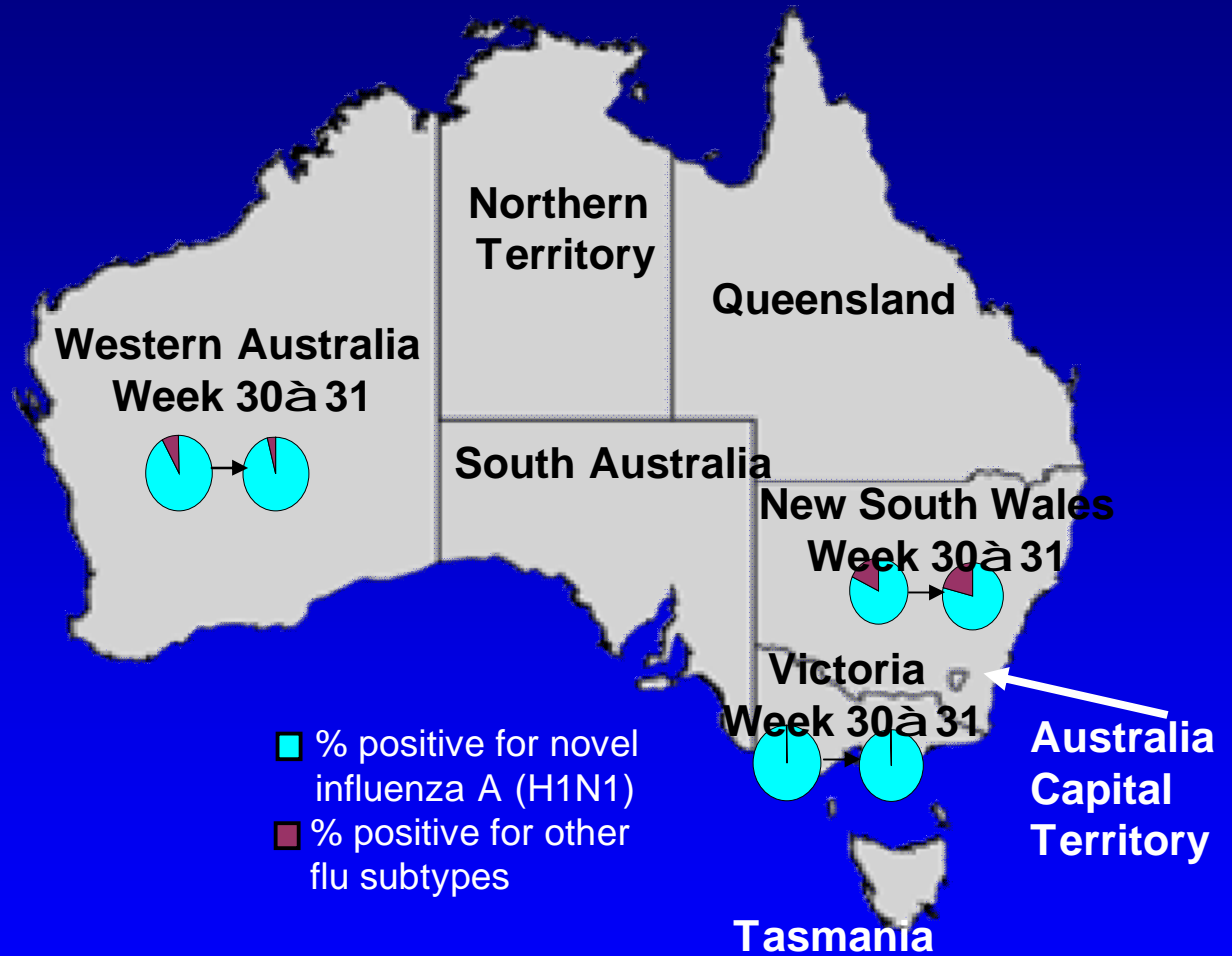
Disease Decreasing in Argentina

- Disease decreasing
 - Laboratory-confirmed data
 - Outpatient data
- Season
 - On time
 - Lasted about 2 months
- School returned 3 August



Australia Experience with Novel H1N1

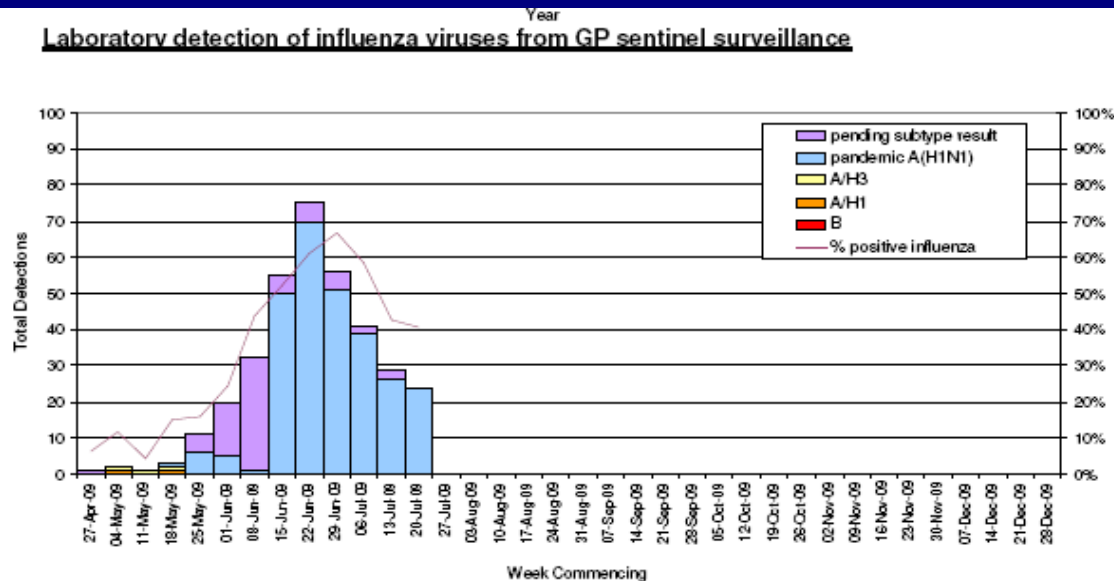
- Illness started in Southeast and moved up the east coast
 - Influenza-like illness declining in Victoria, NSW
 - Influenza-like illness increasing in Queensland and Western Australia
- In all territories with data, H3 almost entirely replaced by novel H1N1
- School holidays
 - Two-week winter holidays have ended



Disease Decreasing in Victoria, Australia

- Disease decreasing
 - Laboratory-confirmed data
 - Outpatient data
- Season
 - Two months early
 - Mid-May to end of July
 - August is usual season
- 6 aged care outbreaks of influenza
 - 5 with seasonal influenza
 - 1 with novel H1N1, only staff infected

Laboratory detection of influenza viruses from GP sentinel surveillance



General practice sentinel ILI surveillance

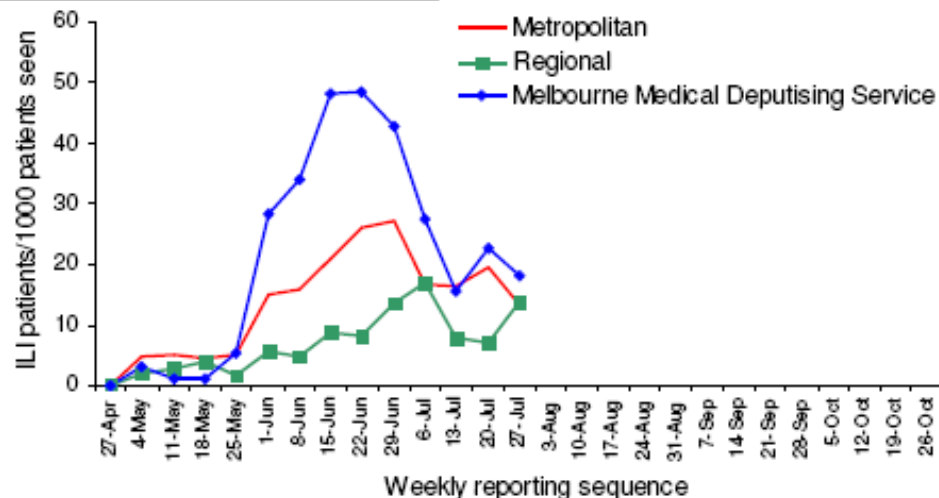
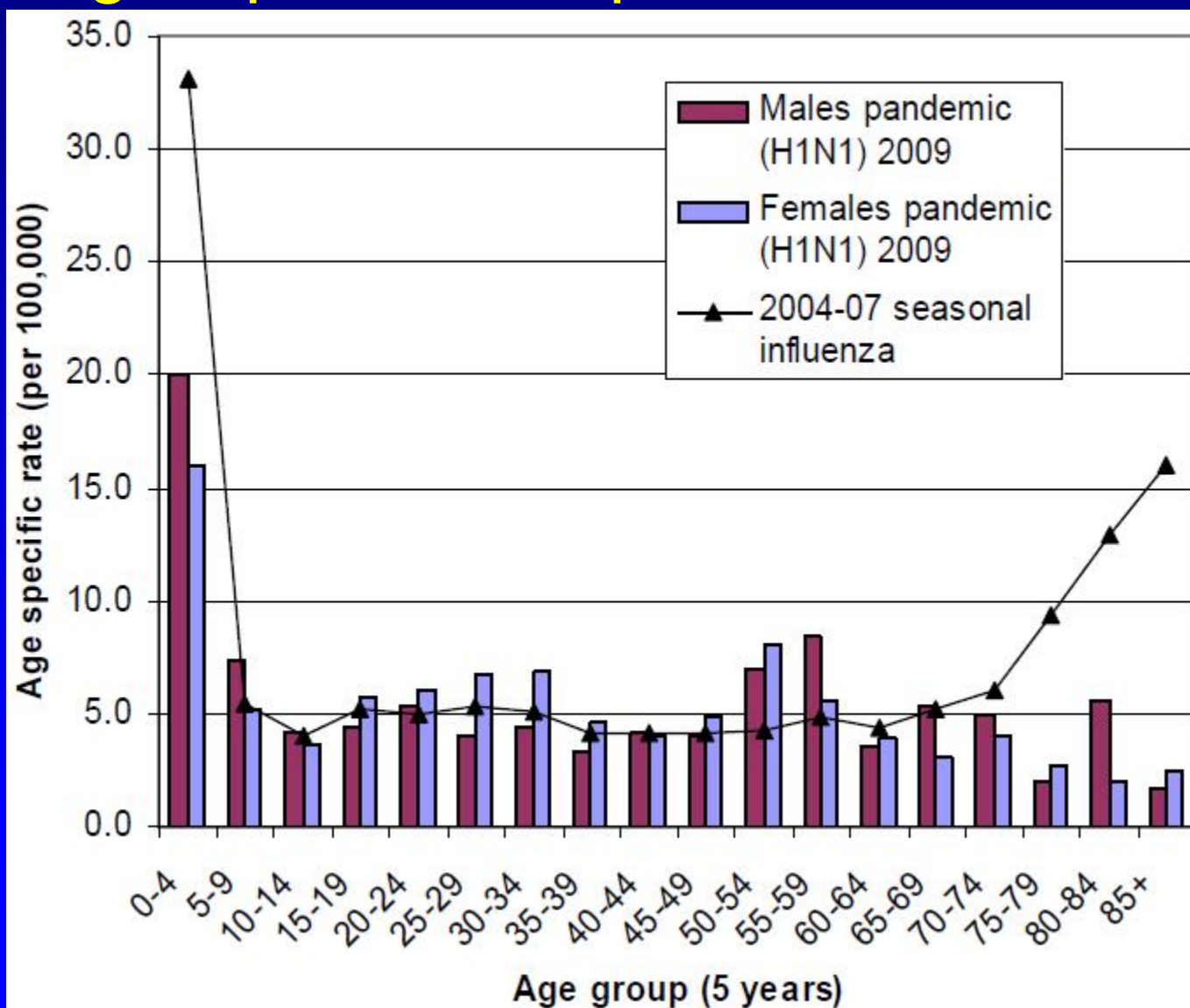


Figure 1. ILI presentation rates at metropolitan and rural general practice sentinel sites and Melbourne Medical Deputising Service visits, 2009 influenza season



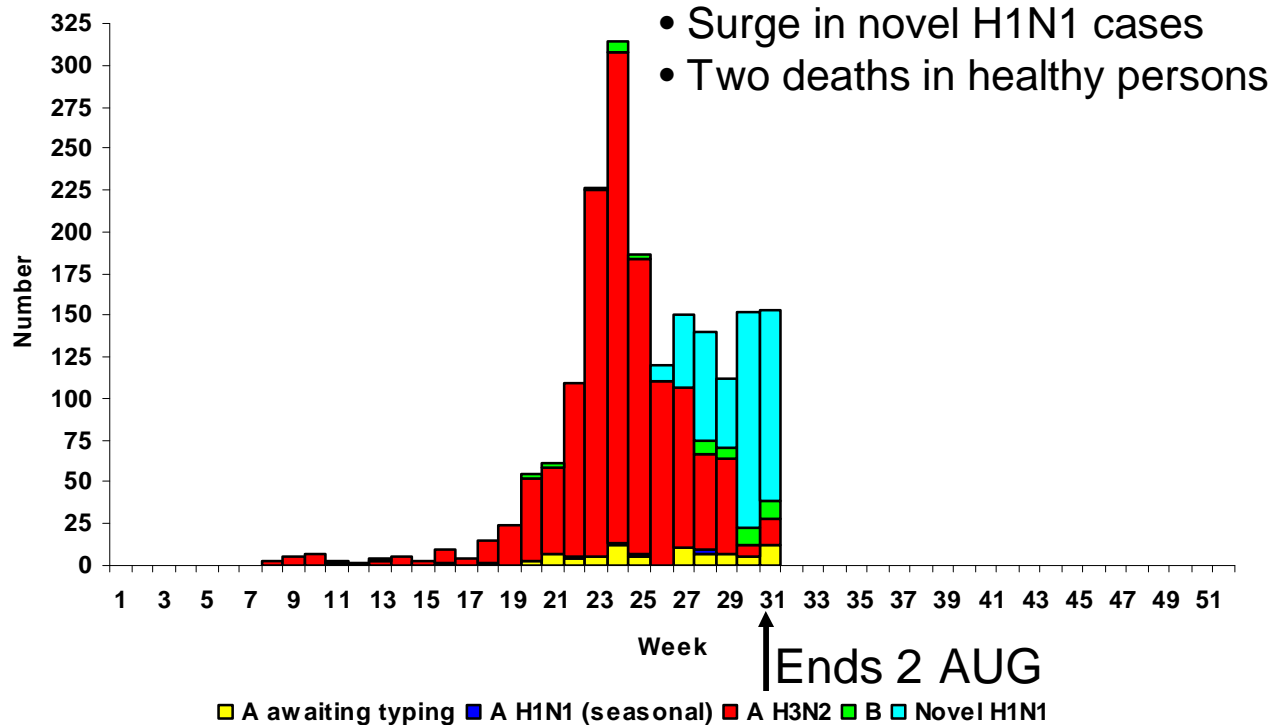
Australia

Age-Specific Hospitalization Rates



Disease Increasing in South Africa

Number of positive samples by influenza types and subtypes :
All surveillance programmes South Africa 2009



Summary of Novel Influenza A (H1N1) in the Southern Hemisphere

- Novel influenza A (H1N1) is now the predominate influenza subtype in circulation
- Epidemiology and clinical characteristics are similar to United States experienced in spring
- No changes in the virus
- Influenza is unpredictable
 - Can not predict fall experience in US
 - Being prepared is important



Acknowledgements

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 - Australia,
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 - Brazil
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 - Domestic Team
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