

Weekly update on oseltamivir resistance to pandemic influenza A (H1N1) 2009 viruses

14 April 2010 -- For this reporting week (8-14 April 2010), 7 additional cases of oseltamivir resistant pandemic influenza A (H1N1) 2009 viruses have been reported. It brings the cumulative total to 285¹ so far. All but one of these² have the H275Y substitution and are assumed to remain sensitive to zanamivir.

Information on some of these cases is included two recent scientific publications:

Harvala H, *et al.* The emergence of oseltamivir-resistant pandemic influenza A(H1N1) 2009 virus amongst hospitalised immunocompromised patients in Scotland, November-December, 2009. Euro Surveill. 2010;15(14):pii=19536. Available online: <http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=19536>

Bin Wang B, *et al.* Detection of the rapid emergence of the H275Y mutation associated with oseltamivir resistance in severe pandemic influenza virus A/H1N1 09 infections. Antiviral Research 2010; in press. Available on line: [doi:10.1016/j.antiviral.2010.04.002](http://dx.doi.org/10.1016/j.antiviral.2010.04.002)

Table 1: Geographical distribution of oseltamivir resistance by the WHO regions (as of 14 April 2010)

	WHO Region					
	AFRO	EMRO	EURO	PAHO	SEARO	WPRO
Number of oseltamivir resistant isolates	0	1	95	78	0	111

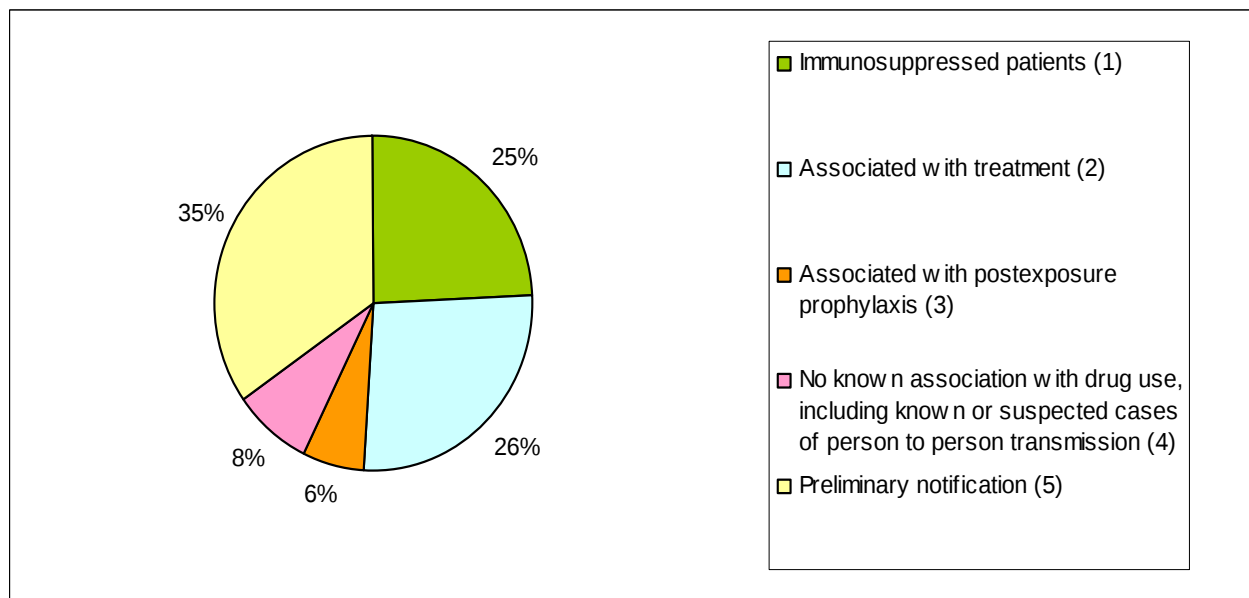


Figure 1: Proportion of the clinical background of reported cases of oseltamivir resistance (as of 14 April 2010). Cases are classified first by identifying those that occur in severely immunocompromised patients (1). The remaining cases are then classified as either occurring during or after oseltamivir treatment (2), associated with post-exposure prophylaxis (3), or occurring in patients who had not used antiviral drugs prior to occurrence of the resistant virus (4). The balance of cases (5) are those where insufficient clinical information is available.

¹ The totals reported here are based on confirmed reports from several sources, and include case reports published in medical journals, as well as reports from national ministries, health agencies and laboratories.

² WHO Euro region report a case of pandemic A(H1N1) 2009 virus that developed in an immunocompromised child with reduced susceptibility to zanamivir and oseltamivir due to an amino-acid mutation at position 223 in the neuraminidase. The clinical implications of this A(H1N1) 2009 variant are being assessed and a publication is expected. The report is available at http://www.euroflu.org/cgi-files/bulletin_v2.cgi