Impact of 2014/15 influenza epidemic in all causes mortality in Portugal

National Influenza Reference Laboratory
Epidemiology Department
National Institute of Health Dr. Ricardo Jorge, I. P.

ECDC Annual Influenza Meeting
Stockholm, Sweden
10-12 June, 2015

Ministério da Saúde

Instituto_Nacional de Saúde
Doutor Ricardo Jorge

ILI rate monitoring

In the end of 2014 and beginning of 2015 a rigorous weather (cold and dry) was felt simultaneous with an intense influenza activity.

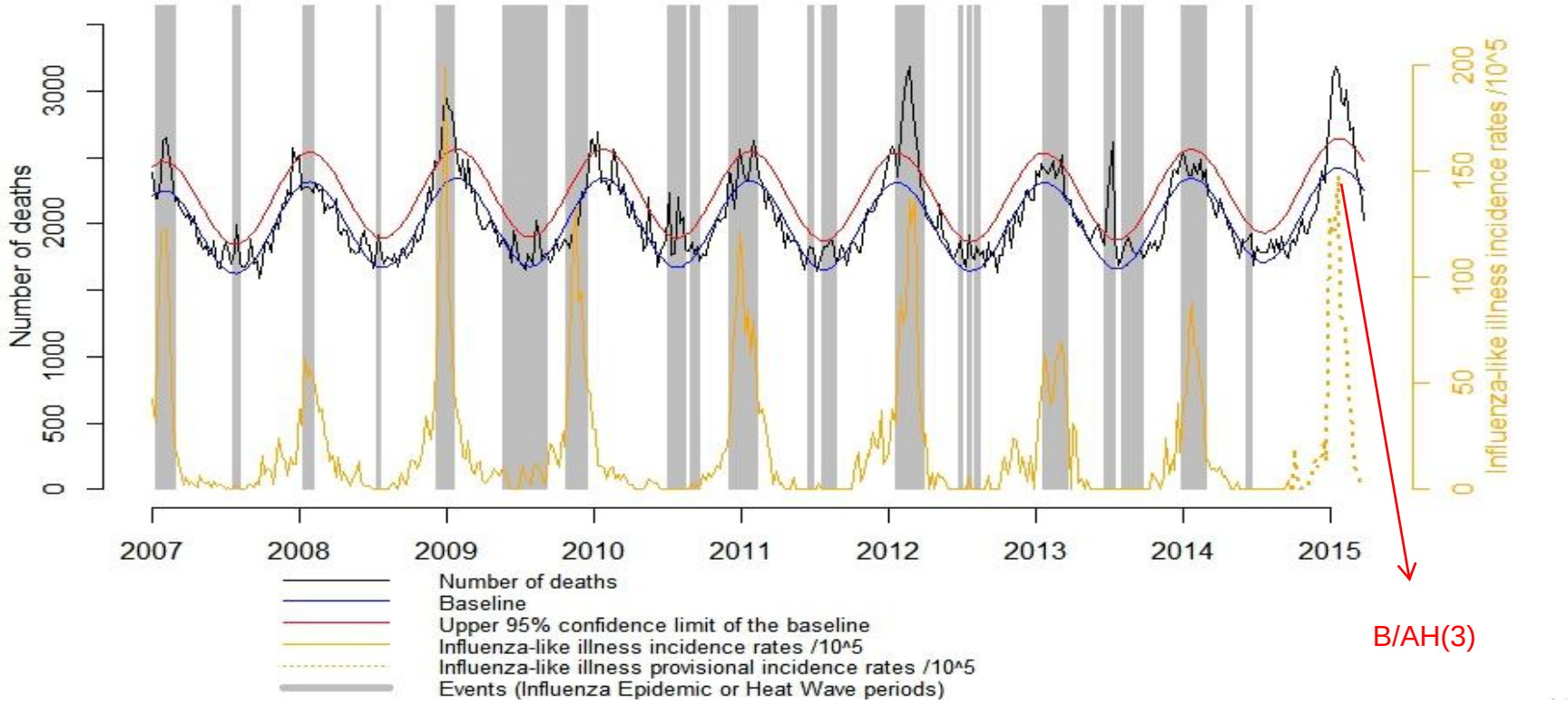

Figure 1. Observed and expected weekly overall all cause mortality, and weekly ILI incidence rates for Portugal (between January 2007 and March 2015).

Monitoring severity - All causes mortality

Daily monitoring of mortality detect: the impact of environment or epidemic events in mortality and monitors influenza epidemic severity

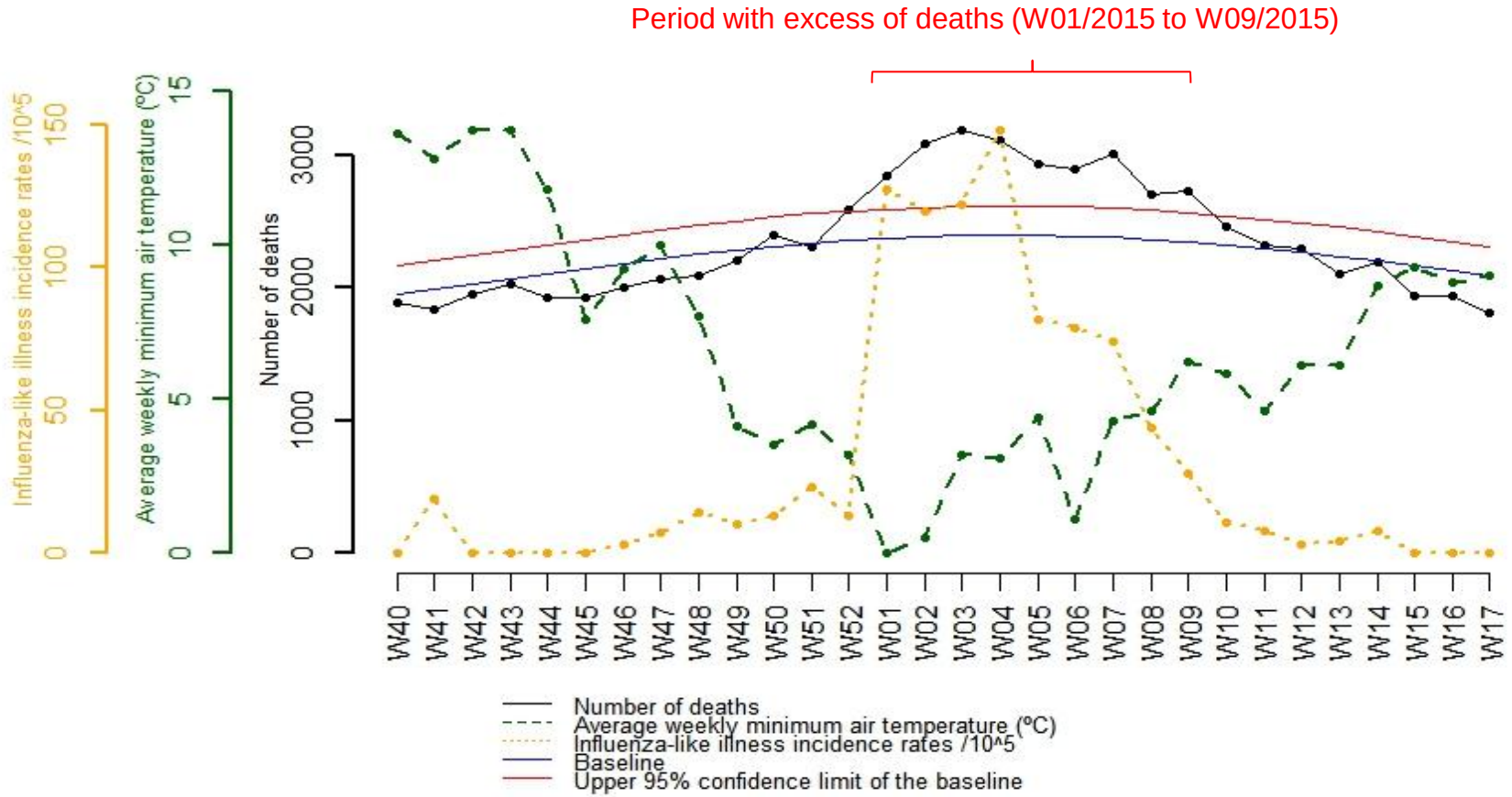

Figure 2. Observed and expected weekly overall all cause mortality, weekly influenza incidence rates, and weekly average minimum temperature for Portugal on this season

Excessive mortality: identifying vulnerable groups

Table 1. Excessive mortality associated with Cold Spell and 2014/15 Influenza Season

		Excess of deaths (95% confidence interval)	Excess of death rate/100.000 inhabitants
	National	4870 (4210;5530)	47
Gender	Male	1971 (1622;2320)	40
	Female	2906 (2540;3272)	53
Age group	0-64	124 (-16;264)	1
	65-74	297 (171;423)	28
	75-84	1452 (1200;1704)	191
	>= 85	2694 (2387;3001)	1063

Comparing winters with excessive mortality

Table 2. Excessive mortality and influenza epidemic´s characteristics by season

Season	Excess of death	Ill rate (/10^5)	Epidemic period (weeks)	Dominant virus (subtype)
1998-1999	8514	252,9	10	A(H3N2)
1980-1981	5638	n.a.	16	A(H3N2)
1981-1982	5533	119,9	14	A(H3N2)
1982-1983	5058	n.a.	12	A(H3N2)
2014-2015	**4870**	**148,0**	**8**	**B; A(H3)**
1984-1985	4784	n.a.	12	A(H3N2)
2011-2012	4116	137,7	9	A(H3)
1986-1987	3920	n.a.	12	A(H3N2)
1987-1988	3529	168,8	10	A(H3N2)
2008-2009	3480	199,5	7	A(H3)