Lessons from the H1N1 influenza pandemic in French overseas territories and interim reports from metropolitan France

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Management of the first wave of the H1N1 influenza pandemic has presented major logistic and infrastructural challenges for public health authorities worldwide. Management in the Northern hemisphere has been in part guided by information provided by countries in the Southern hemisphere, which were the first to experience a winter outbreak of the new influenza H1N1 variant virus. Following reports from Australia and New Zealand, a recent symposium organized in Paris by the French health authorities (November 19, 2009; http://www.invs.sante.fr/behweb/2009/04/index.htm) gathered all the parties involved in management of the epidemics in French overseas territories located in the Southern hemisphere, i.e. New Caledonia, French Polynesia and Wallis and Futuna islands (Pacific Ocean) and Reunion and Mayotte islands (Indian Ocean). An assessment was produced by the Institut de Veille Sanitaire (InVS, the French institute in charge of public health surveillance). The experts concluded that the impact of the influenza outbreak had been more severe than previous seasonal epidemics, with estimated attack rates varying between 8% and 18%. All territories separated infected and non-infected patient admissions in hospitals and outpatient departments. The duration of the epidemic wave was short (8–12 weeks) and the peak incidence was generally observed at the 4th or 5th week. In Mayotte island, virus circulation was longer, a possible consequence of the typical tropical climate. Globally, all experts agreed that the common clinical presentation was mild but the frequency of severe forms or Acute Respiratory Distress Syndrome (ARDS) was unusually high, with a significant proportion (10–20%) of patients admitted to ICUs because of bacterial superinfection (mainly pneumococcus or Haemophilus influenzae). While the health systems were overwhelmed in none of the French overseas territories, it was considered likely that in New Caledonia and French Polynesia, one additional week of case reports at the peak level would have led to worrying saturation of ICUs. Thus the relatively limited availability of Extracorporeal Membrane Oxygenation (ECMO) machines for resuscitation by oxygenation and trained staff was also a cause for concern.

As far as virological diagnosis was concerned, all territories reported saturation of laboratory capacity and, for some (e.g. Wallis and Futuna), prolonged delays in obtaining results, due to the absence of local diagnostic facilities. In addition, diagnosis of influenza often competed with other microbiological diagnoses which were also delayed for similar reasons. In this context, the availability of diagnostic tests and in particular the possible use and reliability of rapid influenza diagnostic tests (RIDTs) were important limiting factors.

In the current issue, we present reports from the Pacific zone (New Caledonia, French Polynesia and Wallis and Futuna islands; see the paper by La Ruche et al.) and from the Indian Ocean zone (Reunion and Mayotte islands; see the paper by D’Ortenzio et al.) that detail the epidemiological analysis of the first pandemic wave. It should be noted that seroprevalence studies are still required to evaluate precisely the actual infection rate in these territories, an important prerequisite for devising a robust strategy for the preparation and management of subsequent influenza epidemic waves. Preliminary data suggest a high proportion of asymptomatic cases, but a precise assessment is still awaited. The current issue also includes new technical diagnostic developments (see the paper by Bouscambert Duchamp et al.) and data suggesting that the use of some (but not all) commercially available RIDTs could contribute significantly to the rapid management of suspected cases (see the paper by Nougairede et al.). In addition (see the papers by Nougairede et al. and by Casalegno et al.), interim reports on the A/H1N1 influenza virus pandemic in mainland France are presented, including information regarding possible viral interference between respiratory viruses that could have affected the spread of A/H1N1 influenza virus and delayed the influenza pandemic in France.

Transparency Declaration

The author declares the absence of dual/conflicting interests.