Early warning and epidemic intelligence in the Mediterranean region and Balkan countries: an EpiSouth network challenge

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**Background:** EpiSouth was launched in December 2006, aiming at improving communicable diseases control in Mediterranean countries. Among priorities, “Cross-Border Epidemic Intelligence” programme, coordinated by the French Institute of Public Health Surveillance, had the objective to set up a framework for information exchange on international and national health threats.

**Methods:** The different needs and expectations of the 27 EpiSouth countries on international cross-border health threats detection were evaluated through a questionnaire in December 2007. As a result, two major tools for early warning information exchanges have been elaborated: weekly Epidemiological Bulletin (eWEB) providing public verified information on international health threats and a secured electronic platform allowing confidential national alerts exchange. Since then, the cross-border epidemic intelligence steering team has been able to analyse data since 2007 and to provide support to strengthen early warning countries capacities.

**Results:** All States declared the significance of early detection of emerging outbreaks in the international area that may affect their population. While all faced similar difficulties regarding control measures implementation, data exchange between countries during large epidemics has proven its usefulness: the added value of data sharing among EpiSouth countries was demonstrated in the A(H1N1) pandemic and the West Nile Fever outbreaks in 2010 and 2011. Countries shared data regarding cases and deaths and information about their strategies (case management, control measures implementation, data exchange on international and national health threats).

Beyond its support during major health crisis, the EpiSouth project has produced more than 200 eWEBs covering around 700 public health events in 134 geographic areas; more than 100 confidential alerts have been shared through the secured early warning platform from Middle-East countries, North Africa, Balkans and Southern Europe countries.
West Nile virus outbreak in the Mediterranean region, 2010-2011

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Background: In 2010, an unprecedented West Nile virus (WNV) outbreak occurred in the Mediterranean region. EpiSouth, the network of 27 Mediterranean and Balkan countries for the control of public health threats, reported WNV outbreaks (human or equine) in 11 EpiSouth countries during both 2010 and 2011 seasons.

Methods: Data regarding numbers of human and animal cases diagnosed in 2010 and 2011, types of WNV surveillance and laboratory capacities in those 27 countries were collected through questionnaires. Official reports issued by OIE and ministries of Health/Agriculture were also considered for cases counts.

Results: For 2010, 26 EpiSouth countries provided information: 485 human cases were reported by 9 countries (Albania, Greece, Israel, Italy, Palestine, Romania, Spain, Tunisia, Turkey), 54% of these cases were reported by Greece. For 2011, 24 EpiSouth countries answered the questionnaire: 230 human cases were reported in 8 countries. While the number of WNV cases was lower in 2011, a geographical extension was observed: an additional country was infected (Former Yugoslav Republic of Macedonia) as well as new regions within countries affected in 2010 (Italy, Greece, Romania and Tunisia). Since 2010, Bulgaria, Croatia, Serbia and the Former Yugoslav Republic of Macedonia have strengthened or implemented specific WN surveillance in their country.

Conclusion: Following the unprecedented 2010 WNV outbreak in the Mediterranean region, the close monitoring of the 2011 season was crucial to better appraise WNV circulation in the area. During both years, outbreaks were identified on all major birds’ migratory routes crossing Mediterranean region and viral circulation was detected in a similar number of countries. It would be unlikely that these two outbreaks remain isolated: sustained transmission cannot be excluded in the coming year. Despite significant improvements since 2010, WNV surveillance systems and access to laboratory facilities still vary across EpiSouth countries. In this context, early alerting and rapid information exchange is essential especially for countries with limited facilities. This highlights the importance of maintaining such a cross-border early warning network integrating a laboratory component in order to foster implementation of adequate and timely control measures across the region.