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Cost-effectiveness assessment of European influenza human pandemic alert and response strategies

NEWSLETTER 4

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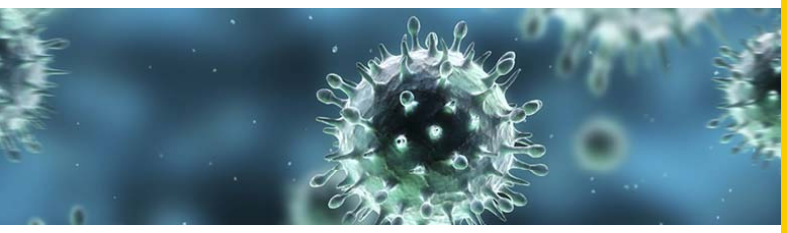

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Multi-criteria analyses comparing human pandemic response strategies

The objective of WorkPackage 6 (WP6) aims to perform multi-criteria analyses for decision-making purpose on the set of response strategies defined in the frame of WP5. This would allow to propose new tools for decision making during influenza pandemics taking into account the complexity raised by multiple parameters.

Led by partner UCBL (Claude Bernard University), the WP6 team took into account 18 response strategies, which have been investigated in the frame of WP5.

The WP6 team:

-set up 10 criteria for evaluating each response strategy

- defined aggregation procedures of the 10 criteria using statistical methods, such as Principal Component Analyses and Multiple Correspondence Analyses

- designed a priorization tool , available online, for generating a rating as an output according to one set of criteria

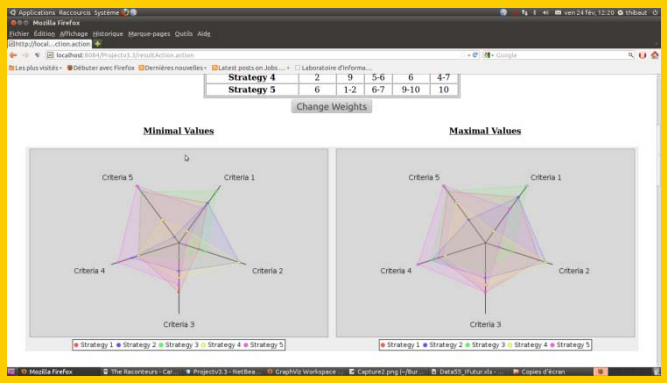
- performed multi-criteria analyses for decision-making purposes according to two main objectives: ranking and cluster response strategies for each of the 4 target countries (France, Italy, Poland and Romania) plus all countries together.

Finally, an overview of the pandemic preparedness plans at national level was carried out using data from Preparedness plans of EU member states, in order to perform multicriteria analyses and cluster EU countries by multi-component.profiles of preparedness plans.
For this purpose, quality indicators of preparedness plans were used to cluster MS according to their preparedness plans quality profiles, such as timelines, monitoring and evaluation strategies, legal framework, financial resources, surveillance sites, animal surveillance, vaccine storage, etc.

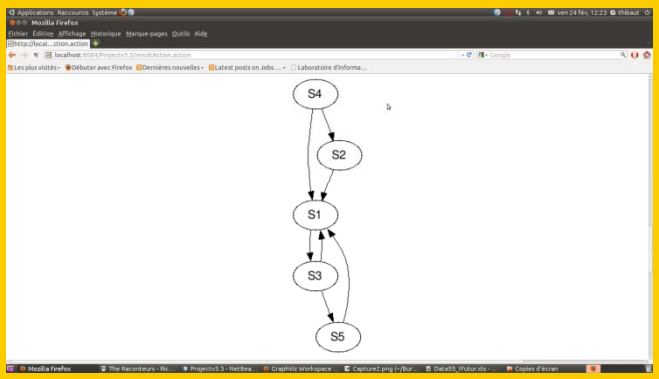
Online priorization tool

A software development tool has been specifically developed to propose a priorization rating of each response strategy. An easy to use application of the tool will be integrated as an online interactive tool in the FLURESP website for Public Health authorities. This would not only propose an easy to use priorization tool, but would also contribute to train decision makers about multi-cirteria approaches. Users would be able to enter their own data and generate original results based on optimization and aggregation techniques.

This figure shows a spider graph as one possible output to represent the importance of strategies according to relative areas:



This figure shows a preference graph linking different response strategies:



This priorization tool will be available online to health decision makers and the public health community on the Fluresp web site by Q4-2013:

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FLURESP beneficiary institutions

- Université Paris Descartes, *France*
- Instituto Vasco de Investigacion y Desarrollo Agrario, *Spain*
- Retroscreen Virology Ltd, *UK*
- Istituto Superiore di Sanita, *Italy*
- Open Rome, *France*
- Laurent Niddam Europai Közössegi Jogasz Iroda, *Hungary*
- National Institute of Public Health, *Poland*
- Institutul National de Sanatate Publica, *Romania*
- Université Claude Bernard Lyon 1, (main beneficiary) *France*

Collaborating partners

- World Health Organisation, Headquarter
- European Centre for Disease Prevention and Control
- University of Crete, *Greece*
- Ministry for Health, Elderly and Community Care, *Malta*

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