

SARNA System For Report's Aggregation – Analytical Tools



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The system SARNA has been constructed in 2009 at Faculty of Cybernetics, Military University of Technology for request of the Polish **Government Safety Centre** due to the high risk of infection *influenza virus (flu)*. The main objectives are: to face a new strain called *swine influenza (A H1N1)*, to minimise the impact of flu pandemic and to monitor/report both flu cases and hospitals' states. It is dedicated for Poland's territorial divisions: from voivodships (16 province Crisis Management Centres at Voivodeship Office), via poviats and communes, to cities and towns (more than 600 hospitals).



SARNA

System raportowania danych o pacjentach i zasobach szpitali
dla zachorowań na grype i zachorowań grypopodobnych

SARNA is a distributed multi-level system for **real-time** monitoring influenza activity levels, gathering data from hospitals (about the number of confirmed infected people or with symptoms of flu infections, deaths connected with flu, acute respiratory disorders, etc.) as well as for simulation and forecasting of epidemics.

The most important functions are as follows:

- hospitals: data input/preview to the questionnaire (web forms), transfer of data directly to the database in Crisis Management Centres, updating of the data about hospitals;
- province Crisis Management Centres (CMC) at Voivodeship Office: review/verification/entering the data in/to any questionnaire, an aggregation and summary of data in time-spatial dimensions;
- the Polish Government Safety Centre: all the functions running to CMC, GIS visualisation, generation and share a text or graphic report, forecasting trends using different competing prediction models, simulation of threats, estimating trends.

Raport dotyczący osób i zasobów szpitalnych dla osób przyjętych z powodu zachorowania na grype lub zachorowania grypopodobnego

Informacje zbiorcze za okres 24 godz. od godz. 8.00 dnia 3 grudnia 2009 r. do godz. 8.00 dnia 4 grudnia 2009 r.

Data ankiety: 2009-12-03 21:07:18

	Dzieci (do 14 lat)	Dorośli (od 15 lat)
1. Liczba osób przyjętych na hospitalizację	<input type="text"/>	<input type="text"/>
2. Liczba osób wypisanych po hospitalizacji	<input type="text"/>	<input type="text"/>
3. Liczba zgonów osób z infekcyjną chorobą układu oddechowego	<input type="text"/>	<input type="text"/>

Stan na godz. 8.00 dnia 4 grudnia 2009 r.

Data ankiety: 2009-12-04 08:00:00

	Dzieci (do 14 lat)	Dorośli (od 15 lat)
4. Liczba osób hospitalizowanych	<input type="text"/>	<input type="text"/>
5. Liczba osób hospitalizowanych wymagającym wspomaganie oddechu respiratorem	<input type="text"/>	<input type="text"/>
6. Liczba wolnych łóżek zapewniających wspomaganie oddechu respiratorem osobom z infekcyjną chorobą układu oddechowego	<input type="text"/>	<input type="text"/>

The proposed technology creates new possibilities for crisis management centres, epidemiology centres as well as governments to estimate and to manage epidemic risks. The advantage is that a proposed general ontology allows to monitor not only virus relating data but also various factors and various threats.

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