Public Health Electronic disease surveillance systems and eHealth integration

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Status of the system before EIDSS wide implementation

For every case registration before, doctor would spend 20 minutes, for epi notification around 24 hours. For mean delay to receive the data was from 1 to 5 days.

- Takes way too long
- Many fields to be filled
- Separate lab and epi parts
- e-Health works separately
- Manual tracking
Public Health Electronic Disease Surveillance System (EIDSS)

EIDSS – Electronic Disease Surveillance System, which strengthens and supports the monitoring and prevention of diseases in the concept of One World-One Health. Through the integration of veterinary and human cases of diseases, and vectors of threats.

- Passive and active surveillance
- Outbreak investigation for each case and aggregated data
- Samples and tests results related to cases
- Comprehensive data analysis and decision-making including historical data and GIS
- Real-time event notifications
- Multiple platforms: PC, Web, Mobile Web, Android
- Development Funded by DTRA, implementation is funded by DTRA in conjunction with the Ministry of Health or other institutions (depending on the country’s participation)

Joint analysis of epidemiology and threat vectors
- Analysis of time, place and object
- Monitor supervision indicators
- Basic statistical analysis
- Standard, custom, and customized reports
- Tables, graphs, maps, and printing
- Export to common formats

Data for possible epi analysis

User friendly interface
Final decision on EIDSS implementation

• The EIDSS system existed and been piloted before COVID-19
• The was no political will to implement it
• When COVID-19 hit and when in May/June 2020 there’s been too many cases the was a window of opportunity
• Within a few month all the country was covered by EIDSS
Number of users, institutions, records

Status at different time periods:

**22.04.2020**
- 25 healthcare facilities
- 136 system users
- Number of registered cases: 21184 (Imported from Google Docs)
- Access configuration – didn’t happen due to absence of demand

**21.04.2021**
- 274 healthcare facilities
- 745 system users
- Number of registered cases: 2 385 000
- Access configuration - changed according to requests 84 times
Prominent advantages

- Short notification time
- Automated reporting
- Daily analytical note on confirmed, hospitalized, recovered-deceased, distribution by age groups, sex, children/healthcare workers in the context of each region
- Intensive incidence and mortality per 100 thousand people in the regions
- Visualization of growth dynamics and mapping
- Summary of information on the total number of tested per day

Since there are two systems which functions overlap EIDSS and eHealth - it is logical to have an integration between the two with the purpose of:

1. Automatic data transfer
2. Fully paperless system
3. Use of existing infrastructure
It takes a doctor only 10 minutes for case registration, for epi notification – under 3 hours or online. A delay no longer present.
System Development Plans

• Data visualization and data upload in many contexts.
• One Health
• Further plans on integration with national registries
• Data optimization and storage (bonus to the speed of the system).
• Creating functionality for advanced system administration by a national-level administrator.
• Development of functionality that will allow integration with other medical systems
Thank you for your attention!