Methods: Electronic Integrated Disease Surveillance System (EIDSS) was developed to address the shortcomings of the existing systems particularly in especially dangerous infections surveillance and than expanded to address all reportable diseases. Development is based on cutting-edge expertise from the Centers for Disease Control and Prevention, Walter Reed Army Institute of Research, and others with more than 100 thousand man-hours of expertise incorporated. Implementation of EIDSS normally takes from 3 to 5 years and involves piloting of a vertical slice, customization to adjust to health priorities, implementation of reports and standard case definitions, building the backbone of the system, establishing evaluation criteria and performance monitoring, and evaluation of the system through test scenarios, table top exercises, legislative reform, etc. Information security is paid close attention to address local legislation on security and personal data protection. Comprehensive training program ranges from basics of computer knowledge to advanced data analysis, and is provided through face-to-face, on-the-job to train-the-trainer and CBT (Computer Based Training) approaches. Early planning of system support, funding, institutionalizing training program is important for successful integral system sustainment.

Results: EIDSS is currently deployed and sustained at more than 350 sites in the Republics of Kazakhstan, Georgia, Azerbaijan, Ukraine and Armenia as a part of the Cooperative Biological Engagement Program (CBEPO) sponsored by the U.S. Defense Threat Reduction Agency (DTRA). EIDSS has fully replaced paper reporting with electronic reporting in Azerbaijan with the rest of the countries on the way to fully accepting the electronic system. Tens of thousand of cases are entered into the EIDSS systems across these countries.

Conclusion: Transformation of national human and veterinary disease surveillance system from paper into integrated electronic form improved timeliness (it takes few minutes to proliferate notification through the system), increased data collection quality through standardized formats, provided ability for integral data analysis at different levels of the national system.