

Electronic HIV case management system facilitates monitoring and evaluation of HIV care and treatment programs in Central Asia

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Background

Until 2011, all Central Asia Republics relied on paper-based systems to manage HIV patient data at the service-delivery level (referred to as AIDS centers), including in HIV testing and counseling clinics, HIV care and treatment clinics, and laboratories. Completion of paper forms was time consuming for clinicians. Data from numerous paper-based sources were also difficult to aggregate and analyze. Activities to assure and verify the quality of collected data were limited.

ICAP's Work

With funding from CDC/PEPFAR, ICAP is supporting the Ministries of Health (MOH) in Kazakhstan, Kyrgyzstan and Tajikistan to develop and implement the electronic HIV case management system (EHCMS)—a web-based system designed to collect, store, analyze and transfer epidemiologic, laboratory and clinical data for all confirmed HIV cases. It currently consists of three key modules: individual case record, automated reporting tool, and supply management, planning and forecasting module for drugs for antiretroviral therapy (ART). Data are entered by staff at the AIDS centers and accessed by the National AIDS Center (NAC) for monitoring, evaluation and surveillance purposes.

ICAP began by ensuring political support from the MOH which endorsed nation-wide scale-up of EHCMS. Automatically generated reports in EHCMS were fully aligned with the national reporting requirements and national HIV program indicators. Next, ICAP trained staff from AIDS centers and NAC (epidemiologists and clinicians) in the system, and provided on-site and remote mentoring and support to complete retrospective and ensure prospective entry of data on all individuals testing HIV-positive at AIDS centers in the three Republics. ICAP also trained clinicians working in AIDS centers to use EHCMS data to monitor their patients. To ensure that all data entered in EHCMS are complete and accurate, ICAP collaborated with the MOH to develop standard operating procedures for data quality assurance (DQA) and conducted DQA audits together with staff from NAC.

Results

The introduction of EHCMS resulted in a number of duplicative paper-forms being abolished by the MOH, decreasing the reporting burden for clinicians and allowing them to spend more time on patient care. Following widespread introduction of EHCMS, intensive training and on-site mentoring, AIDS center staff were increasingly committed to the system, not only to complete routine reporting, but also to assess their own achievements and conduct more detailed evaluation of program outcomes. The Kazakhstan NAC held a national conference to discuss progress of HIV care and treatment programs using data collected and aggregated from EHCMS. Development of a separate EHCMS module on ART planning and forecasting facilitates estimation of local and national needs for ART drugs and ultimately enhances supply chain management. Implementation of routine DQA visits with participation from NAC helped strengthen the leadership and coordination role of NAC, provided them with a better understanding of the challenges and needs of AIDS centers, and ultimately enhanced confidence in the data reported up to the MOH.

Conclusion

EHCMS is an effective tool to collect, aggregate and report HIV-related data at the local and national levels. It also enhances program evaluation and facilitates program management. Additionally, EHCMS allows clinicians to more effectively monitor treatment outcomes of individual patients. ICAP will continue to support NAC and AIDS centers to ensure that EHCMS data are used for evidence-based program improvement planning.

Figure 1: Use of EHCMS data to improve quality of HIV care and treatment programs

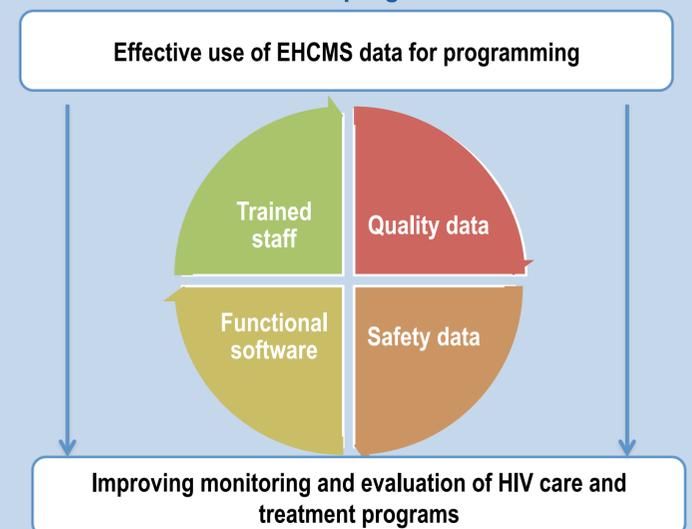


Figure 2: Key parts of EHCMS: individual electronic case record and automated reporting forms and registers

Individual Electronic Case Record:

- social-demographic data
- laboratory data
- epidemiological data
- clinical data

Automatically generated reporting forms and registers

Figure 3: A nurse scans the package with ART drugs using handheld barcode scanner connected to EHCMS

