



Department of Health and Human Services  
Centers for Disease Control and Prevention



**Cancer Surveillance Branch -  
National Program of Cancer Registries—  
Advancing E-cancer Reporting and Registry  
Operations (NPCR-AERRO)\***

**NPCR-AERRO: Developing a Cancer  
Surveillance Informatics Structure in  
the New E-Health Environment**

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\*Originally: NPCR-Modeling Electronic Reporting Project (NPCR-MERP)

# 1 Executive Summary

The National Program of Cancer Registries (NPCR) is funded and managed by the Cancer Surveillance Branch (CSB), Division of Cancer Prevention and Control (DCPC) of the Centers for Disease Control and Prevention (CDC). CDC builds state and national capacity through support of the NPCR to monitor the burden of cancer including disparities among various subgroups in the population and provides data for research; evaluation of cancer control activities; and planning for future healthcare needs.

Cancer surveillance presents several challenges, including delay in availability of data, resources for collecting data, completeness of reporting, lack of standardized data exchange for non-cancer registry data sources, and limited datasets.

To help in addressing these needs, the CSB supports the NPCR Advancing E-cancer Reporting and Registry Operations (NPCR-AERRO) project which develops best practices, guidelines, and recommendations for an ideal cancer surveillance informatics infrastructure that takes advantage of emerging health information technology and national and international standards. NPCR-AERRO uses a collaborative framework to construct a comprehensive model to demonstrate the potential of electronic cancer registry reporting and automated registration to grantees and partners.

Goals in addressing challenges with cancer surveillance data collection include:

- Improve completeness, timeliness, and quality of data.
- Reduce costs for registries and data providers significantly over time.
- Develop a national plan or “blueprint” to identify priorities that make better use of cancer surveillance resources.
- Provide guidance for development of standards based systems for cancer registries.
- Improve data exchange between systems through use of industry standards.

NPCR-AERRO works with hospitals, central cancer registries, and national programs and data sources such as pathology laboratories, hospital registries, and physician offices to help in meeting these goals in the context of the emerging development and use of the Electronic Medical Record (EMR), Electronic Health Record (EHR), and Personal Health Record (PHR).

NPCR-AERRO focuses on a three-pronged approach:

- **Modeling:** Consensus best practices for electronic cancer registration and reporting
- **Analysis/Design:** Requirements for data and tools to further define best practices
- **Implementation:** Demonstrated use of best practice models and requirements in cancer registry software, training tools, and related products

NPCR-AERRO relies on standard information technology tools and processes including Unified Modeling Language (UML) and the CDC Unified Process (CDC UP) to develop models, requirements, and implementation products, and to manage the project as a whole.

Overall, NPCR-AERRO demonstrates how the EHR, consensus standards, electronic reporting and automation can improve the timeliness, completeness and quality of cancer registry data.

All NPCR-AERRO activities are scoped and tracked by approach. The Cancer Surveillance Branch website at <http://www.cdc.gov/cancer/npcr/informatics/merp/index.htm> provides up-to-date descriptions and status of project activities.

The website also houses a “CyberView” library of best practice models: <http://www.cdc.gov/cancer/npcr/informatics/merp2/>