Electronic Health Records: The Intersection of Public Health Surveillance and Clinical Medicine

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NAACCR 2015 Annual Conference
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“Cancer surveillance data systems can also become powerful tools for assessing quality of care when linked to other data sources or when used to select individual cases for special studies.”

National Cancer Policy Board, 2000
The effect of race/ethnicity and insurance in the administration of standard therapy for local breast cancer in Florida

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The Roles of Teaching Hospitals, Insurance Status, and Race/Ethnicity in Receipt of Adjuvant Therapy for Regional-Stage Breast Cancer in Florida

Lisa C. Richardson, MD, MPH, Lili Tian, PhD, Lydia Votli, MS, Abraham G. Hartzema, PharmD, MSPH, PhD, Isildinha Reis, DrPH, Lora E. Fleming, MD, MPH, PhD, and Jill MacKinnon, BA
Socioeconomic Disparities in Breast Cancer Treatment Among Older Women

Arica White, PhD, MPH, Lisa C. Richardson, MD, MPH, Helen Kontitas, MD, and Maria Psut, PhD

ORIGINAL ARTICLE

Discontinuation of Radiation Treatment among Medicaid-Enrolled Women with Local and Regional Stage Breast Cancer

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The Early Years: Public Health Reporting and Standards

1993

CDC/ATSDR Steering Committee on Public Health Information and Surveillance System Development

1997

Develop National Electronic Laboratory Reporting (ELR) HL7 Implementation Guide
1999
Develop NAACCR Volume V Pathology Electronic Laboratory Reporting HL7 Implementation Guide

2001-2009
Collaborate with College of American Pathologist (CAP) to develop Cancer Checklists and Reporting Pathology Protocols
CDC collaboration with Virginia Commonwealth University Hospital System and Virginia Cancer Registry, and NCI-SEER. (Modeling Electronic Reporting Project (NPCR-MERP) 2003-2004
NPCR-Modeling Electronic Reporting
Project Outcomes

- Develop a national blueprint
  - outline priorities to better focus the use of cancer surveillance resources
  - provide guidance for development of standards based systems for cancer registry
- Improve the completeness, timeliness, and quality of the cancer data reported
- Reduce the amount of manual processes, improve data accuracy and make better use of CTRs time
- Improve data exchange between systems through use of industry standards
- Produce a model that can be utilized by vendors to develop cancer registry systems that will be interoperable with other PH systems and the EHR
NPCR-Advancing Electronic Reporting and Registry Operations (AERRO)—expanded VCUHS collaboration

NPCR-AERRO epath Pilot Project
- Started with 18 participating states and 1 national laboratory
- Currently have 44 participating states and 22 national/regional laboratories

Formed NPCR-AERRO Clinic/Physician Office Workgroup:
- Reviewed ASCO CORE document to identify overlap
- Developed preliminary data item list for physician office EHRs to report to state cancer registries

American Recovery and Reinvestment Act (ARRA) and Health Information Technology for Economic and Clinical Health (HITECH) Act
- Financial incentive for hospitals and physician offices to implement certified EHR software

CDC participated on several national workgroups to encourage the inclusion of cancer reporting from pathology laboratories and physician offices to state cancer registries
Clinical Oncology Requirements for the EHR (CORE) project

• CORE brings together a broad range of key partners:
  • NCI Center for Biomedical Informatics and Information Technology (CBIIT)
  • American Society of Clinical Oncology (ASCO)
  • National Community Cancer Center Program (NCCCP)

• Goals of CORE:
  • Describe the functions oncologists wanted from an EHR
  • Provide structured data elements for use in oncology EHRs
  • Provide common set of interoperability standards for oncology-specific data to be shared between oncologist EHRs.

• Clinical Oncology Requirements for the EHR (CORE), Released in October 2009
Cancer Electronic Health Record (caEHR) Project

- Aimed to develop an Ambulatory Oncology Functional Profile to be conformant with HL7 EHR-S Functional Model.
  - Used CORE White paper as a baseline

- The **HL7 EHR-S Ambulatory Oncology Functional Profile** was published for public comment in 2010
Enhancing Cancer Registry Reporting from Physician’s Offices

Generate Initial Framework (2009-2010)
- Reviewed ASCO CORE document to identify overlap
- Developed preliminary data item list for physician office EHRs to report to state cancer registries

- IHE profile based on data item list (created in part by reviewing the ASCO white paper
- Implementation Guide is referenced as standard for Meaningful Use Stage 2 reporting to cancer registries

- Tested profile at IHE Connectathon
- Demonstrations at 2011-2015 HIMSS Annual Conference and 2015 ASCO Annual Meeting
Improving Completeness

- Increasing number of cancers are diagnosed in physician’s offices and other non-hospital settings
  - Melanoma
  - Prostate cancer
  - Leukemia
  - Bladder cancer

- Utilize electronic reporting of these cases directly to state central registries
“We often don’t know we are making history until we are in the middle of it....”

Sylvia Burwell, Secretary, Health and Human Services (HHS)
How does it really feel?
What is Meaningful Use?

- Meaningful Use is using certified Electronic Health Record (EHR) technology to:
  - Improve quality, safety, efficiency, and reduce health disparities
  - Engage patients and families in their health care
  - Improve care coordination
  - Improve population and public health
  - All while maintaining privacy and security
- Provides incentive payments to eligible professionals, eligible hospitals, and CAHs that demonstrate meaningful use of certified EHR technology
Meaningful Use: Are we there yet?

Meaningful Use Stage 1
Financial incentives for the meaningful use of EHR’s to improve patient care

Meaningful Use 2
CMS and ONC Final Rule for Stage 2 Meaningful Use (2012)

Meaningful Use 3
Proposes an overall objective for Public Health and Clinical Data Registry Reporting
Meaningful Use Activities

• **CMS and ONC Final Rule for Stage 2 Meaningful Use (2012)**
  – Objectives included Cancer Reporting from Eligible Professionals to State Cancer Registries

• **Test and Demonstrate Operability (2010-2015)**
  – Integrating Healthcare Enterprise (IHE)
  – Healthcare Information Management and Systems Society (HIMSS)
  – American Society for Clinical Oncologists (ASCO)

• **CMS and ONC Notice of Proposed Rule Making published (2015)**
  • Rule includes Cancer Reporting from Eligible Professionals to State Cancer Registries, but placed under Public Health Registry measure
Meaningful Use Stage 2: The Here and Now.

- **35** EHR vendors (106 total products) have been certified for the Stage 2 cancer reporting criteria.

- *At least 43* state cancer registries are participating in Stage 2

- *At least 42* states plan to or currently use eMaRC Plus for physician reporting

- **2,165** Medicare Eligible Professionals (EPs) have attested that they performed cancer reporting in 2014 (out of 53,998 Medicare Eligible Professionals who were scheduled for Stage 2)
Meaningful Use Stage 3: Proposes an overall objective for Public Health and Clinical Data Registry Reporting

- Cancer is not proposed as its own measure; it is one option within the Public Health Registry Reporting measure

It will be important to reach out to providers and EHR vendors to make sure cancer reporting is on their radar
How did we get here? NPCR’s efforts...

Policy input and Promotion

• Recommended inclusion of pathology and physician reporting to central cancer registries in Stage 1 of MU
• Provided input on importance of cancer reporting for CDC’s testimony to Health Information Technology Policy Committee (HITPC) Meaningful Use Workgroup
• Stressed to CDC, ONC, the HITPC on the importance of including cancer reporting in MU

Visibility

• Participated in IHE Connectathons from 2009-2015 to test ePath and physician reporting
• Participated in HIMSS showcases from 2010-2015 to demonstrate ePath and physician reporting
Guidance and Technical Assistance

- Provided town hall meetings and presentations to provide guidance on MU cancer reporting
- Facilitated development of guidance documents for MU implementation
- NPCR provides ongoing technical assistance to registries, EHR vendors, and providers

Standards development and informatics efforts

- **NAACCR Vol II**: Agreed-upon standards for cancer registry reporting helped pave the way
- **NPCR’s MERP** (later AERRO): Developed models and standards for electronic data exchange
- **NPCR ePath project**: Worked to develop electronic pathology reporting using the NAACCR Volume V standard. Currently include 44 states and 22 labs.
- **NPCR Clinic/Physician Office project**: Worked to standards for electronic reporting from physician office EHRs to central cancer registries
Where the magic happens

Your comfort zone
What have been the LEVERS for success in CDC’s work?

- Working with State Cancer Registries to be sure concerns are addressed proactively
- Working with electronic health records vendors
- Working Office of the National Coordinator (ONC)
- Working within and outside of CDC with similar goals
- Leveraging the work of others (Infectious Diseases) to move forward in a coordinated fashion (might not be the best word)
- Working with the providers who are likely to use the cancer registries module: American Society of Clinical Oncology
We have NPCR.

We can do it.
Adapt to Expectations Using New Technology

- Build in more nimbleness and flexibility
  - New strategies and approaches

- For example, Early Incidence Reporting
  - Cancer Incidence report
  - Treatment report
Overall Goals of Early Case Capture

- Increase availability of pediatric data
- Facilitate Rapid Reporting
- Expand Reporting Relationships with facilities
- Capture initial set of minimum data elements (followed by full report)
- Submit bi-annually to CDC
Innovative Methods

- State Health Information Exchange (HIE)
- Inter-state e-Path reporting
- Electronic diagnostic imaging (eRad)
- Electronic Health Records
- Collaboration with large pediatric hospitals
% Reports Submitted To State Central Cancer Registries Based On First Submission Within 30 Days

- 2012: 38%
- 2013: 58%
- 2014: 56%
Balance.

Don’t break the system while pushing it forward.
For more information please contact Centers for Disease Control and Prevention

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The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.