A New Approach: Using electronic health records to capture unreported cases and missing data

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Key Staff

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Presentation Objectives

- Describe how MCR-ARC is obtaining previously unreported cases and treatment information through use of EHRs
- Discuss issues & challenges

Background

- Laws/Statutes in every state
  - Facilities must report new cancer cases to a central cancer registry (CCR)
- In past, emphasis on hospital-based cases
  - Abstracted by hospital CTR
- Capturing non-registry cases & treatment is resource intensive
  - Clinics/ physician offices (C/POs)
  - Other non-hospital facilities
  - Small hospitals without registries

Background

- Increasing number/type of cases being diagnosed/ treated entirely outside a hospital setting
  - Melanoma & prostate cancers
  - Leukemias & lymphomas
  - *In situ* & localized breast and colorectal cancers
- Finding a cost-effective way to obtain such cases and more complete treatment information becomes increasingly important
  - Accurate incidence rates/trends
  - Avoid bias

Background

- Informatics/information technology and the adoption of electronic health records (EHRs) by C/POs offers an opportunity for CCRs to improve case completeness & data quality
  - Spurred on my Meaningful Use requirements
- ARRA funding of two special projects by CDC/NPCR through contracts with ICF Macro
  - MCR-ARC
  - Kentucky Cancer Registry (KCR)

Purpose of Project

- Improve annual case completeness and timeliness through innovative, yet practical, approaches that:
  - Focus on importing data from primary care & targeted specialty physician office EHRs; and
  - Can be replicated or adapted by other CCRs

Project Description

- **Project Period** – 34 months – 12.01.10 – 09.30.13)
- **First Steps (pre-award):** Identify
  - Potential sites
    - Commitment from at least one physician
  - Potential partners/collaborators/resources
    - MO-HITECH
    - MO HIT Assistance Center (MO's Regional Extension Center)
    - Missouri Cancer Consortium (MCC)
    - CDC/NPCR AERRO Physician Office/Clinic Work Group

Methods/Activities

- Entered into subcontract with ICF (Macro)
- Engaged in internal strategic planning
- Made two strategic decisions:
  - Created MCR-ARC
  - Redesigned website (http://mcr.umh.edu)
- Worked with internal/external partners to identify potential implementation sites

Methods/Activities

- Reviewed work plan
- Assigned % of existing staff & hired new staff
- Revised work plan
  - Already had commitment from influential MD
  - No need to ID primary care (PC) EHR vendors – obtain from MO HIT Assistance Center
  - Need to obtain commitment from urologist(s) & medical oncologist(s)
- Prioritized activities

Methods/Activities

- Regular meetings & conference calls
  - CDC/NPCR AERRO Workgroup
  - MO-HITECH
  - MO HIT Assistance Center
  - CDC/ICF Macro/Funded SPs
  - MCR-ARC SP #3 team
- Reports
  - Monthly/quarterly reports to ICF Macro/CDC
  - Quarterly ARRA reports

Methods/Activities

- Obtained list of certified (Meaningful Use) PCP EHR vendors from MO HIT Assistance Center
  - MO & KS RECs agreed on common list – 12 vendors
  - Discussed with KCR Director
- Met with vendor reps at 2011 & 2012 HIMSS annual meetings
  - Discussed project – night & day difference 2011 to '12
  - Demos of software
  - Arranged for web-based demos (2011; dropped)

First Challenge (Feb 2011)

- EHR vendors can be certified for meaningful use without following OMB guidelines on race & ethnicity
  - No provision being made for multiple race fields
  - In some EHR systems it is even possible to choose Hispanic as race and African-American as ethnicity
- Cancer not in Stage 1 of MU
  - Vendors resistant to make changes (but not if in Stage 2)

Next Challenges (2011)

- Clinic withdrew
  - Volunteer participant
  - Reason: Cancer not in Stage 1 of MU
- Delays
  - Identifying PC practices
  - Developing/distributing brochures
  - Going live with revamped website
  - Obtaining list of med oncs/hematologists

Methods/Activities

- Identified/recruited C/POs & CAHs
- Made site visits/obtained commitments
  - Hannibal Clinic – Vitera (I) – sent test data
  - CAH #1 – McKesson (I)
  - C/PO #1 – eClinical Works (I)
  - CAH #2 – NextGen (PI)
  - C/PO #2 – Next Gen (S)
  - CAH #3 – Miditech (S)
  - C/PO #3 – Meditech (I)

Note: I = Implemented; PI = Partly implemented; S = Selected

Methods/Activities

- Made site visits/obtained commitments
  - C/PO #4 – Meditech (I) – test file & data file
  - C/PO #5 –All Scripts Pro (I) (Impact?)
  - C/PO #6 – GE Centricity (I)

Other

- Radiology Dept, MU Hospitals & Clinics
  - Pilot project – QuantumMark & AIM
- Specialty C/POs
  - Urologist – developed own EHR, create/send form
  - Med Oncs/Hematologists – work with L&LS

Results

- Bringing in previously unreported cases/ obtaining additional information:
  - Directly from C/PO EHRs
  - Download from hospital Radiation Dept.
  - Test report from EHR developed by Urologist
  - Later in year, CAH that sends paper copies of med records will submit EHR file
  - Plan add one or more Med Oncs/Hematologists

Next Challenges

- When data from EHRs brought into MCR-ARC
  - Where store
  - How process
  - How integrate into QA activities
- Assess impact of
  - Cut in NPCR funding
  - End of ARRA funding
- Utilize strategic planning to offset impact:
  - Policies, procedures, workflow, etc.
  - ID funding opportunities, alternative funding

Conclusions

- Underreporting of cases is largely due to lack of human and financial resources
- Funding to improve infrastructure and import data directly from EHRs can:
  - Improve data quality and completeness;
  - Provide data needed for public health surveillance; and
  - Facilitate comparative effectiveness and other research.

Discussion/Implications

- Anticipate positive outcome for MCR-ARC
  - Improve data quality, completeness & timeliness
  - Continue collaborations
- Big picture
  - Other NPCR-funded CCRs adopt or adapt
  - Reducing # of missed cases & improving timeliness - implications for surveillance & CER
    - Describe/reduce disparities in population subgroups.
- Challenges remain – approaches & resources

Questions?

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