



ENHANCING DATA QUALITY AND PROCESS IMPROVEMENT: THE CANCER REGISTRY OF GREATER CALIFORNIA EXPERIENCE

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BACKGROUND INFORMATION

- ▶ Who is the Cancer Registry of Greater California?



BACKGROUND INFORMATION

- ▶ The Cancer Registry of Greater California (CRGC):
 - ▶ Includes 48 of California's 58 counties
 - ▶ Covers approximately 93% of the land area of California (148,832 square miles)
 - ▶ Has a population of nearly 20,000,000 residents (53% of California's population)
 - ▶ Includes a diverse population – 66% White, 7% Asian, 5% African American, 1% Pacific Islander, 1% Native American and 20% have more than one race
 - ▶ Among all race groups, 30% also identify Hispanic as their ethnicity
 - ▶ Annually, approximately 83,000 new cancer patients are diagnosed and approximately 32,000 patients die from their disease in the area

BACKGROUND INFORMATION

- ▶ CRGC Timeline:
 - ▶ 2001 - became a SEER registry (first full year of data: 2000)
 - ▶ 2012 - awarded a 5 year grant from the State of California to manage the 6 CRGC regional registries



Cancer Registry of Greater California (CRGC) Regions & Counties



COLLABORATING PARTNERS

- ▶ The areas in white on the California map, indicate our collaborating partners in the other California SEER registries:
 - ▶ Cancer Prevention Institute of California (CPIC) – covering the nine counties in the Greater San Francisco/San Jose/Monterey Bay Area
 - ▶ USC Cancer Surveillance Program – covering Los Angeles County
- ▶ California central registry at University of California at Davis, in Sacramento, CA



BACKGROUND INFORMATION

| Region | Name | # of Reporting Facilities | # of New Cases Annually |
|--------------|--|---------------------------|-------------------------|
| 2 | Cancer Registry of Central California | 45 | 11,560 |
| 3 | Sacramento Sierra Cancer Registry | 57 | 15,860 |
| 4 | Central Coast Cancer Registry | 21 | 6,630 |
| 5 | Desert Sierra Cancer Surveillance Program | 52 | 15,202 |
| 6 | Cancer Registry of Northern California | 45 | 8,490 |
| 7/10 | Cancer Registry of San Diego and Imperial Counties/Orange County | 56 | 24,865 |
| Total | | 276 | 82,607 |

BACKGROUND INFORMATION

- ▶ CRGC is one of 3 SEER Registries in California
- ▶ CRGC regions account for approximately 25% of the cases submitted to SEER
- ▶ CRGC regions account for approximately 55% of the cases submitted to the California central registry

BACKGROUND INFORMATION

- ▶ CRGC Operations Staffing
 - ▶ Principal Investigator
 - ▶ Senior Director of Operations
 - ▶ 3 Regional Directors and one Deputy Director
 - ▶ Data Quality Control Director
 - ▶ 1 FTE Auditor
 - ▶ .50 FTE Education and Training Coordinator
 - ▶ 16 Visual Editors (8.4 FTE's)

VISUAL EDITING

- ▶ Statewide, conduct visual editing on 16 data items of 20% randomly selected cases and any cases failing edits on file upload

| Visually Edited Data Items | Counted in Accuracy Rate – July 1, 2012 |
|--|--|
| 1) County of Residence at Diagnosis | X |
| 2) Gender | X |
| 3) Race Fields 1-5 | X |
| 4) Spanish/Hispanic Origin | X |
| 5) Date of Diagnosis | X |
| 6) Site/Subsite * | X |
| 7) Diagnostic Confirmation | X |
| 8) Laterality (Only paired sites listed in Volume I) | X |
| 9) Histology – Type (for year of diagnosis) | X |
| 10) Grade | X |
| 11) CS Tumor Size** | X |
| 12) CS Extension** | X |
| 13) CS Lymph Nodes** | X |
| 14) Number of Regional Nodes Positive/Examined | X |
| 15) CS Metastasis at Diagnosis** | X |
| 16) CS Site Specific Factors 1-25*/** | X |

* Counted as a single discrepancy

** For cases diagnosed 1/1/04 forward and for cases with an unknown date of diagnosis first seen at the facility 1/1/04 forward.

THE CHALLENGES

- ▶ How to assess data quality for the percentage of cases not being visually edited?
- ▶ What mechanisms are in place to ensure consistent visual editing in all regional registries?
- ▶ How do we ensure that quality control activities improve data quality?
- ▶ Where should the focus of our work efforts be directed to be most impactful?
- ▶ How can we also improve efficiencies while improving data quality?
- ▶ How to ensure that we fix the data now and implement mechanisms to prevent this issue in the future?

TARGETED AUDITING AND DATA QUALITY CONTROL

- ▶ No longer random
- ▶ Focus on known problems or issues
- ▶ Ensure Data Quality Markers are within allowable limits
- ▶ Develop a complete data quality improvement process

START AT THE BEGINNING.....

WHO'S ABSTRACTING THE CASES?

- ▶ Identify abstractors
- ▶ Create a Reporting Facility Abstractor Information Master File to include the following:
 - ▶ Name
 - ▶ Initials Used
 - ▶ Indicate Whether Employee or Vendor
 - ▶ Name of Vendor Agency or Service
 - ▶ CTR Status
 - ▶ If a CTR, provide CTR number
 - ▶ If a non-CTR, indicate if CTR eligible

PURPOSE OF THE MASTER FILE

- ▶ Identifies all abstractors submitting data from a reporting facility
- ▶ Confirms the CTR status of all reporting facility abstractors [as the California Code of Regulations indicates under Title 17, Division 1, Chapter 4, Subchapter 1, Article 3, 2593 Neoplasms, Cancer, Section (c) Staffing: The identification and collection of cancer data in the regional cancer registries and cancer reporting facilities shall be performed by Certified Tumor Registrars (CTR) or staff eligible to take the certification examination].
- ▶ Enables the identification of abstractor coding and abstracting problems so that prompt corrective actions can be implemented for improved data quality

PURPOSE OF THE MASTER FILE

- ▶ Ability to identify and focus on visual editing new abstractors and low performing abstractors for early intervention

VISUAL EDITING

- ▶ Develop Visual Editing Guidelines for the following purposes:
 - ▶ To ensure that visual editors are reviewing data in a consistent and efficient manner
 - ▶ To be used as a training tool for new visual editors

VISUAL EDITING

- ▶ Conduct monthly teleconferences with CRGC regional registry visual editing staff
 - ▶ Topics discussed:
 - ▶ Edits
 - ▶ Data Management System Issues
 - ▶ Discuss Ideas for Resolving Abstracting and Coding Problems and Trends
 - ▶ Brainstorm to Develop New Tools and Resources for Registrars

VISUAL EDITING

- ▶ Recommend that the CS SSF's required to be collected are highlighted in the data base management system
- ▶ More efficient for visual editors to identify only the required SSF's

AUDITING

- ▶ **Recoding Audits –**
 - ▶ Select a topic to improve specificity from a non-specific, NOS, Unknown or “Other” code option
 - ▶ Focus on an M/PH rule in which there is a clear site/histology statement
 - ▶ Example: Prostate cases diagnosed on or after 1/1/2007 with a histology of acinar adenocarcinoma (8550) should be coded to adenocarcinoma (8140)
 - ▶ Develop a dashboard to track auditing activities
- ▶ **Casefinding Audits –** Select facilities with changes in completeness counts
- ▶ **Reabstracting Audits –** Select facilities with lower visual editing accuracy rates

AUDITING

- ▶ Utilize study requests as the foundation of an audit
- ▶ Augment with more diagnoses years to review and improve more data
- ▶ Save data queries so that they can be run in the future

AUDITING

- ▶ Recoding Audits Performed Since October 2012:
 - ▶ Race code 98 – Other Race
 - ▶ Cases with non-specific histologies (histology codes 8000 - 8001)
 - ▶ Cases with unknown laterality in paired sites
 - ▶ Prostate cases with stage M1 who had a prostatectomy (study request)

AUDITING RESULTS AND RECOMMENDATIONS

- ▶ Final audit summary report should include recommendations for the following, when applicable:
 - ▶ Ensure the necessary data changes were made in the data base
 - ▶ Registrar Education and Training
 - ▶ Abstracting and Coding Clarifications
 - ▶ Edits
 - ▶ Business Rules
 - ▶ Data base bugs, fixes or enhancements

EDUCATION AND TRAINING

- ▶ New CRGC web site: www.crgc-cancer.org
- ▶ Webinars – main method used for registrar education
 - ▶ NAACCR Webinar Series
- ▶ Quarterly Newsletter – *Chats*
- ▶ Reporting Advisory – Abstracting and Coding Updates and Clarifications
- ▶ News Broadcast – Announcements, latest SEER SINQ updates
- ▶ Abstracting and Coding Talks (ACTS) – short, focused 15 minute webinars

SUMMARY

- ▶ Limited resources have necessitated changes in the approach to developing Data Quality Control Plans
- ▶ Targeted quality control activities maximize the best use of resources while improving data quality
- ▶ Keep data quality control activities as simple as possible
- ▶ Ensure a comprehensive process to fix current data and implement measures to prevent the same issue from occurring in the future
- ▶ Capitalize on process improvement opportunities while conducting quality control activities – Think Big!

CONCLUSION

- ▶ Having a comprehensive data quality control plan is critical to ensuring the validity and consistency of your data over time
- ▶ Diversity in data quality control activities is more important than ever
- ▶ Continuous quality control activities provide the opportunity to assess data and process improvements on an ongoing basis
- ▶ Maximize the outcomes impact of quality control activities
- ▶ Market and message your data – be thoughtful and be bold!

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 - ▶ Mignon Dryden, CTR
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 - ▶ Mark Cruz, CTR

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