Evolution of CoC within ACoS

- Two plans proposed in 1912:
  - standardization of surgeons - resulted in College formation - 1913
  - standardization of hospitals - resulted in JCAH formation - 1918

Cancer Clinic Standards

- ACoS response to the American Society for the Control of Cancer
- First surveys conducted in 1931
- 1937 there were 240 clinics approved
- Approximately 78,000 patients seen in approved clinics in 1939

CoC Evolution...

- Concept of registries introduced in 1921 - bone sarcoma
- First standards to evaluate cancer clinics and registries published - 1930
- Campaign Committee renamed Committee on Treatment of Malignant Disease
- ACS support provided to survey cancer detection centers - 1947
- Grassroots network of surgeons identified to promote cancer programs - 1947

Commission on Cancer Mission

“The CoC is a consortium of professional organizations dedicated to improving survival and quality of life for cancer patients through standard-setting, prevention, research, education, and the monitoring of comprehensive quality care.”

Commission on Cancer Membership

40 national professional organizations and Fellows of ACoS

- Surgeons
- Medical Oncologists
- Radiation Oncologists
- Radiologists
- Pathologists
- Nurses
- Cancer Registrars
- Nutritionists
- Hospice and Palliative Care Administrators
Primary CoC Objectives

- Sets standards for quality multidisciplinary cancer care delivered primarily in hospital settings
- Surveys hospitals to assess compliance with those standards
- Collects standardized and quality data from approved hospitals to measure treatment patterns and outcomes
- Uses the data to evaluate hospital provider performance
- Develops effective educational interventions to improve cancer care outcomes at the national and local level

CoC Current Structure

- Executive Committee
- Liaison
- Info. Tech. and Data Standards
- Intramural Research
- Quality Assessment & Measure Development
- Melanoma
- Liver
- Sarcoma
- Colo-Rectal
- Pancreas
- Gynecologic
- Head & Neck
- Thoracic & Esophagus
- Thyroid and Parathyroid
- Upper G.I. Hepato/Biliary
- Urology
- Breast
- Brain / CNS

Approvals Program

- Establishes standards for cancer care delivery
- Surveys hospitals to assess compliance with standards
- Evaluates standards and survey and review processes
- Promotes and recruits cancer programs
- Recruits and trains surveyor team

CoC Cancer Program Standards 2004

- Released January 2004
- Modifications developed for NCI, VA, and pediatric programs
- Revised manual with modifications scheduled for release – December 2005

Cancer Programs in United States Hospitals

- Hospitals with approved programs 25%
- Hospitals without approved programs 75%
- General medical/surgical facilities, including Puerto Rico – 5000

Estimated new cancer patients in 2005: 1,372,910 *

Distribution of CoC Approved Cancer Programs by State
Facility Information Profile System - FIPS

- Benefit for CoC-approved cancer programs
- Data sharing activity with the American Cancer Society
- CoC-approved cancer programs share information on resources and services and cancer caseload
- Information shared is used by ACS National Call Center and posted on ACS Web (www.cancer.org)
- Cancer caseload information sharing is voluntary

Cancer Liaison Program

- Provide direction for volunteer state chairs and local cancer liaison physician network
- Oversee appointment and reappointment process for network participants
- Coordinate orientation and evaluation activities
- Identify and participate in collaborative activities with ACS
Program Membership

- 65 State chairs
  - Selected by College Chapters - surgeons
- 1,600 physician volunteers
  - Selected by hospital cancer committees
  - 55% surgeons; 45% other specialties
- Activities governed by Committee on Cancer Liaison
- Program funded by American Cancer Society

State Chair Key Activities

- Regularly communicate with liaison physicians
- Spearhead CoC initiatives at state/regional level
  - Recruit new programs
- Utilize NCDB data to improve quality cancer care
- Participate in collaborative activities
  - College chapter
  - ACS
  - Comprehensive Cancer Control/State Cancer Plans

Liaison Key Activities

1. Serve as the Physician Champion within the cancer program.
2. Serve as the liaison between the CoC and the cancer program.
3. Serve as an agent of change within the community.

Physician Champion within the cancer program

- Promote CoC Approval and Compliance with CoC Standards
- Serve on the facility cancer committee (2.5)
- Advocate for the cancer registry (2.10)
- Ensure accurate physician staging (4.3)
- Support compliance with guidelines (4.6)
- Promote participation in clinical trials (5.1.5.2)
- Improve the quality of care delivered (8.1.8.2)

Liaison between the CoC and the cancer program

- Regularly report to the cancer committee
- Spearhead CoC quality studies
- Support participation on special studies
- Support participation in FIPS
- Ensure quality submission of NCDB data
- Play a role in the CoC survey

Agent of change within the community

- Facilitate provision of support services and prevention and early detection programs
- Facilitate the relationship with ACS
- Invite ACS staff to cancer committee meetings
- Become involved in the state cancer plan
- Become engaged in the community
**What Is The NCDB?**

- The NCDB was founded in 1989 as a joint project of the American Cancer Society and the Commission on Cancer (CoC) of the American College of Surgeons (ACoS).
- The National Cancer Data Base Data (NCDB) is a nationwide oncology database for over 1,400 hospitals in 50 states.

**Data Collected**

- Patient Demographic information
- Tumor characteristics
- Staging information
- First Course Therapy
  - Surgery
  - Radiation
  - Systemic
- First Recurrence & Survival Status

**Limitations To The Data**

- Delay between treatment and data acquisition
- Primarily inpatient data
- Participation is limited to approved programs
- Need to prioritize requests, because of limited staff resources at NCDB

**Other Co-variables Of Interest**

- **Dx/Rx Hospital Characteristics**
  - Resources and services available
  - Location
  - Case volume
- **Risk Adjustment Measures**
  - New data manual requires collection of secondary diagnoses at time of diagnosis: comorbidity index

**NCDB Database Redesign:**

- (2000-2002)
  - Web-based data submission
  - Logging and editing submissions in real time
  - Data base quality assessment and sampling strategies

**What Is The NCDB?**

- The database has been used as a clinical surveillance mechanism, monitoring changes and variations in patterns of cancer care and patient outcomes.
- The NCDB holds information on about 80% of all newly diagnosed cases of cancer nationwide.
- Records include many of the demographic, clinical, and health system data elements necessary to assess the quality of care.
Data Quality

- In its early years the NCDB was not tied to the COC Approvals Program and standards for data quality and consistent coding were not yet established.
- Since the early 1990’s NCDB has collaborated with software providers, state central cancer registries and SEER:
  - Standardization of cancer data codes, coding rules, and data collection procedures
  - Done under the auspices of the North American Association of Central Cancer Registries (NAACCR)
- Since 1996 all COC approved programs are required to submit data to the NCDB.
  - The data must be submitted in standard form with uniform codes and coding rules.
  - The data must pass comprehensive single-item and inter-item edit quality checks.
  - Certified Tumor Registrar required.

NCDB Analytic Quality

- In addition to analytic cases diagnosed during the most recent year, COC-approved facilities submit data on cases diagnosed 5, 10 and 15 years prior, updated with follow-up information.
- The requirement that COC-approved facilities submit their historic data has had the effect of expanding and improving the data available for the early years during which NCDB participation was voluntary.

NCDB Analytic Data Quality

- Relative 5-year survival rates for endometrial carcinoma:
  - African American (AA) versus non-Hispanic Caucasian (NHC)

<table>
<thead>
<tr>
<th></th>
<th>AA(%)</th>
<th>NHC(%)</th>
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<tbody>
<tr>
<td>NCDB</td>
<td>55</td>
<td>86</td>
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<tr>
<td>SEER</td>
<td>55.3</td>
<td>85.9</td>
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National Cancer Registration Budgets

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<tr>
<td>CDC</td>
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<tr>
<td>SEER</td>
<td>$22,000,000</td>
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<tr>
<td>NCDB</td>
<td>$1,200,000</td>
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</table>

13 Multi-Disciplinary Disease Site Teams

- Breast
- Colorectal
- Gynecologic Oncology
- Head and Neck
- Liver
- Melanoma
- Pancreas
- Sarcoma
- Thoracic Oncology
- Thyroid and Parathyroid
- Upper GI
- Urology
- Brain

JNCI 94 (11), 2002
NCDB CASE COUNTS
1985-2003

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Cases</th>
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<tbody>
<tr>
<td>Gastrointestinal</td>
<td>3,106,032</td>
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<tr>
<td>Colorectal</td>
<td>1,939,119</td>
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<tr>
<td>Breast</td>
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<td>Prostate</td>
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<td>NSCLC</td>
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<td>Head &amp; Neck</td>
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<td>Cervix</td>
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<tr>
<td>Non-Hodgkin's Lymphoma</td>
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<td>Melanoma</td>
<td>444,732</td>
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<tr>
<td>Ovary</td>
<td>310,085</td>
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<tr>
<td>Thyroid</td>
<td>226,746</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>17,723,963</strong></td>
</tr>
</tbody>
</table>

**Cumulative Cases Captured by NCDB by Diagnosis Year**

**Breast Cancer**

A Benchmarking Example

**% Partial Mastectomies (Stage 0 & I)**

**% of Stage 0 and I Breast Cancer Patients Receiving Partial Mastectomy by State and Geographic Region: 1990**
Facility-Specific Benchmark Reports

- Released on web in April, 2003
- Application password-protected to CoC approved programs
- Generates reports
  - Data for your own program
  - Aggregate data
  - Data from your own program compared to aggregate
- Data now available for 60 cancer sites
- 950,000 cases submitted to NCDB for 2002

Colon Cancer

A Benchmarking Example

Breast Cancer at Your Hospital
Comparisons with NCDB Norms

- AJCC Stage
- Mastectomy Surgery Patterns
- Stage/Treatment-Specific Survival

Treatment Modality Reported for Stage III Colon Cancers: 1990 - 2002

% of Stage 0 and I Breast Cancer Patients Receiving Partial Mastectomy by State and Geographic Region: 2000
5-Year Observed Survival Rates: Stage III Colon Cancers by Type of Treatment, Cases Diagnosed 1993-1995

<table>
<thead>
<tr>
<th>Years From Diagnosis</th>
<th>Surgery w/ Chemo (n=12,927)</th>
<th>Surgery Alone (n=9,276)</th>
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<tr>
<td></td>
<td>100</td>
<td>88.6</td>
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<td>50</td>
<td>58.8</td>
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</tbody>
</table>

Quality Indicators
CP3R: Cancer Program Practice Profile Reports

- Appropriate post-operative administration of chemotherapy for Stage III (node positive) colon cancer.
- Extent of lymph node examination for patients undergoing resection of colorectal cancers.
- BCS for early stage breast cancer.
- Post-operative radiation for early stage breast cancer BCS recipients.
- Proportion of Stage I non-small cell lung cancer patients receiving surgery.
- Annual operative volume for selected procedures.

CoC Special Studies

- Under analysis:
  - Local Excision for Rectal Cancer: Trends and Outcomes
  - Margin Width as a Determinant of Local Recurrence and/or Mortality in Patients with Breast Conserving Surgery
  - Assessments and Comparisons of Quality of Care Criteria for Localized Prostate Cancer between Black and White Men

- Under development:
  - Chemoradiation and treatment of nasopharyngeal cancer.
  - Glioblastoma Multiforme: Relationship between resection and survival and implications for phase II trial design for novel surgically implanted agents.
National Quality Forum

CoC proposed measures for:

**Breast**
- Needle biopsy precedes excision/resection.
- Post-operative radiation for early stage BCS recipients.
- Post-operative chemotherapy administered to patients with tumors greater than 1 cm in greatest diameter.
- Tamoxifen or Anastrazole administered to patients with HRP+ Stage I or Stage II disease.

**Colon**
- Pre-operative colonoscopy.
- Extent of lymph node examination for patients undergoing resection.
- Post-operative administration of chemotherapy for Stage III disease.

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