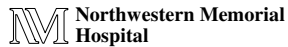


DATA QUALITY AND DATA USES

May 8, 2008

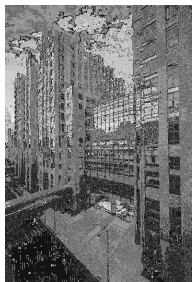
By
Sue Kessler
Manager, Transcription and Registries



Agenda

- Northwestern Memorial Hospital
- Hospital Quality Plan and Objective
- Tumor Registry Statistics
- Manager Job Description and Responsibilities
- Data Quality and Uses
- Summary

Northwestern Memorial Hospital Chicago, Illinois



Feinberg and Gatter Pavilions



New Prentice Women's Hospital

- Second oldest hospital in Chicago (1865)
- Only acute care hospital in Chicago's central area
- Chicago's most preferred hospital (National Research Corporation) for 11 years
- Primary teaching affiliate of Northwestern's Feinberg School of Medicine
- Average of 17% operating cash flow margin for last 20 years
- AA+ bond rating by Standard and Poor's and Aa/AA category rating for more than 25 consecutive years
- Approximately \$1 billion in revenue

NMH Statistics

- Located downtown Chicago IL, between the Lake Superior and Michigan Ave
- Accreditations
 - National Cancer Institute designated
 - The Joint Commission
 - Founding member of the National Comprehensive Cancer Network
 - American College of Surgeons Commission on Cancer
- Listed in *Hospitals & Health Networks* magazine's list of America's "100 Most Wired" hospitals and health systems for state-of-the-art technology supporting patient care
- Successfully completed rare 4-way domino paired kidney exchange transplant surgery

FY07 NMH Statistics

- 897 Patient beds
 - Feinberg Pavilion
 - Prentice Women's Hospital
 - Stone Institute of Psychiatry
- 43,855 Inpatients admissions
- 477,065 Hospital outpatient registrations
- 35,000 Routine mammogram screenings performed yearly at Lynn Sage Comprehensive Breast Center
- 12,137 Inpatient surgical cases
- 18,758 Outpatient surgical cases
- 76,701 Emergency department visits
- 1,545 Medical staff
 - 37 Medical Oncologists
 - 7 Radiation Oncologists
- 6,962 Organization wide employees

A Typical Day At NMH

- 119 Inpatient Admissions
- 1,203 Outpatient Registrations
- 202 Emergency Department Visits
- 83 Surgeries (60% Outpatient)
- 27 Deliveries
- 1,600 Concurrent Active Electronic Health Record Users
- 90,000 New Orders Processed Online
- 225 Philanthropic Interactions

NMH Mission and Strategy

Mission: Northwestern Memorial is an academic medical center where the patient comes first

Strategy:

- To Provide the Best Patient Experience (BPE) from the Patient's Perspective
- To Recruit, Develop and Retain the Best People who Share the Organization's Values and Achieve Results
- To Develop the Resources to Achieve Our Mission and Vision through Exceptional Financial Performance

As a Result, NMH Has Been Recognized for Quality and Excellence



- "Most Preferred Hospital" for 12 Years
- Leapfrog Group's "Top Hospitals List"
- UHC Top 10 for Quality and Accountability
- 2005 National Quality Health Care Award
- Achieved Magnet Status, 2006
- Named to "100 Best Companies for Working Women" for 7 Years
- 8 Specialties in U.S. News & World Report of Best Hospitals

Achieving Best Patient Experience Determining Improvement Priorities

- **Use of Data to Understand and Improve Quality and Patient Safety**
 - Comprehensive Claims Data Review
 - Adverse Event Database
 - **DASHBOARD PRIORITIES**
 - Literature

Achieving Best Patient Experience Determining Improvement Priorities

- Prioritize the Drivers to be Addressed
 - National Efforts/Literature (IHI Save 100K Lives, Leapfrog, JCAHO, CMS)
 - Consensus Meetings with Clinical and Operational Leadership
- Implement Improvements to Measurably Improve Quality and Patient Safety
 - Use of Process Improvement Methodology (DMAIC)
 - Leverage Information Technology

Ideal System

- Collect and enter data once as part of normal work flow
- Rely on structured data vs. free text
- Use same data format i.e. dates/time and same numerators and denominators-population and definitions are the same
- Timing requirements allow for use of standard databases not customized or double work
- Physician concerns are same as Hospital's and CMS or requesting Agencies so buy in is not a problem

Ideal System

- Data available in Medical Record is captured and available for automatic extract
- Eliminate mapping and use standard system with built in logic
- No variability in where and how data is stored in Medical Record
- Data collected for internal purposes can be used for external reporting

How to Decide Which Measures Determine the Best Patient Experience Dashboard Criteria



Measures Used on the Hospital Dashboard

- Measures that assist with accountability and support key initiatives
- Measures that are externally transparent and have not shown sustained performance

Measures Used on the Hospital Dashboard

- Measures that have been approved by the Professional Standards Committee and have not shown sustained performance and which remain relevant
- Each measure selected must have a key quality committee also responsible for oversight

Electronic Medical Record

- Advantages
 - Data readily available for all caregivers to view
 - Most data in one system
 - No more paper system registry
- Disadvantages
 - Only as good as a physician or house staff document
 - Cut and paste feature readily available and used often
 - Private physicians charts are not in the EMR

Tumor Registry

Statistics

- NMH Registry began in 1976
- Reference date is 1992
- Largest registry in the state of Illinois
- Accessioned 3823 for 2006
- 92% follow up rate
- Follow approximately 10,688 analytic patients per year

Statistics (cont)

- Submit data monthly to the IL State Cancer Registry and yearly to the National Cancer Data Base
- Received a 3 year Award with Commendation from the American College of Surgeons (ACoS) Commission on Cancer in 2006, next survey 2010
- 20% increase in the number of analytic cases seen from 2002-2006
- Electronic Registry System software

Staffing

- **4 full-time abstractors**
 - Accession, abstract and conduct follow up activities for required malignancies diagnosed and/or treated at the abstracting facility.
 - All credentialed, 2 RHIT, 1 CTR, 1 RHIA, CTR
- **1 health information clerk**
 - Reviews all pathology reports, disease and operation, cytology, and radiation oncology rosters for reportable cases. Conducts follow up activities to track patients outcomes.
- **1 manager**
 - Manage the staff, attend to the high level requests and activities
 - Facilitate the Quarterly Committee on Cancer meeting which comprises of 25 physicians, clinicians and administrative staff. Facilitate the Executive Cancer Committee, a subcommittee of the Committee on Cancer. Instrumental in providing the data for the Cancer Program Annual Report and American College of Surgeons Commission on Cancer survey.

Data Collection

- Review surgical pathology, radiation oncology rosters, cytology rosters, dermatology pathology reports, bone marrow reports for eligibility, treatment, and follow up
- Abstract pertinent information from the patients medical record, EPIC, outside pathology reports and communication with outside registries
- Maintain follow up on patients until they expire or 100 years old

Data Strengths

- Abstractors trained to collect the same data
- Ability to utilize many systems to collect pertinent data
- Support of the Committee on Cancer
- State of IL and National Cancer Data Base require specific edits to ensure data is "clean"

Data Weaknesses

- Can only enter what the physician has documented
- Medical Oncology not always performed as an inpatient
- Patient not always good historian
- Database has set fields to complete, can only add a small percentage of additional fields
- Patients move without leaving a forwarding address

Committee on Cancer

- Purpose is to set goals, plan, initiate, implement, evaluate and improve all cancer related activities at NMH.
- Governed by the American College of Surgeons (ACoS) Commission on Cancer
- Multidisciplinary committee, includes physicians, clinicians and administrative staff, with a designated chairman.
- Meet quarterly, first Monday of February, May, August, and November

Executive Cancer Quality Committee

- Subcommittee of the Committee on Cancer
- Meets monthly
- Discuss data quality, patient care satisfaction, treatment discrepancies
- Completes a monthly dashboard for reporting
- Key quality committee responsible for oversight of registry data
- Day to day work

Quality Plan

- Monthly peer review
- Software edits for NCDB and State of IL submissions
- CP3R and E-quip edits in system, run on selected populations monthly to ensure we are collecting all pertinent data for submissions and data requests
- Physicians staging to ensure compliance
- ACoS required 10% monthly review

Tumor Registry Manager Reports

- Manager of:
 - Tumor Registry
 - Medical Transcription
 - Master Patient Index Departments
- All interact with each other

Tumor Registry Manager Reports

—Medical Transcription

- Contact physicians to complete delinquent procedure dictations, outstanding signatures, and tumor staging forms
- Interact with physicians and house staff on a weekly/monthly basis
- Create in EMR tumor staging forms

Tumor Registry Manager Reports

—Master Patient Index

- Responsible to ensure data integrity in the medical record number assignment process
- Verify correct patient information and linkage with encounters

Tumor Registry Manager Responsibilities

- Facilitate the Committee on Cancer
 - Coordinate the planning of the agenda and speakers
 - Contact speakers
 - Present the dashboards and administrative report

Tumor Registry Manager Responsibilities

- Executive Quality Cancer Committee
 - Dashboard
 - Run reports to review data, treatment
 - Recommend physician education for documentation
 - Investigate options for obtaining pertinent information
 - Notify private practices of importance of information and make arrangements to review their charts either online or paper

Data Comparison

Dimensions of Practice	Measure	Goal	Baseline Timeframe	Baseline	FY07 Q1	FY07 Q2	FY07 Q3	FY07Q4
Surgical Volume								
	Pancreas		FY06	30	8	6	8	10
	Esophagus		FY06	20	9	5	6	4
	Gastric		FY06	22	11	10	7	8
	Rectal		FY06	65	15	22	19	14

Data Comparison (cont)

Dimensions of Practice	Measures	Goal	Baseline Timeframe	Baseline	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4
Documentation								
	% of case compliant with clinical staging		FY06	99.9%	99.9%	99.3%	99.4%	98.9%
	% of physicians complaint with overall staging		FY06	100%	100%	99.8%	99.5%	99.9%

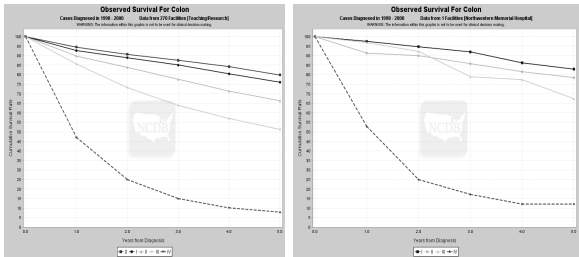
Data Comparison (cont)

Dimensions of Practice	Measures	Goal	Baseline Timeframe	Baseline	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4
Process Measures								
	Breast Cancer							
	BRT		FY06	97%	95%	96%	93%	97%
	MAC		FY06	95%	100%	99%	98%	100%
	HT		FY06	96%	87%	86%	89%	90%

Data Comparison (cont)

Dimensions of Practice	Measures	Goal	Baseline Timeframe	Baseline	FY07 Q1	FY07 Q2	FY07 Q3	FY07 Q4
Colorectal Cancers								
	12RLN		FY06	82%	85%	80%	76%	88%
	RECR		FY06	100%	95%	99%	97%	96%
	Adjuvant Chemo		FY06	95%	67%	92%	88%	91%

Survival Comparison



Tumor Registry Manager Responsibilities (cont)

- Software Vendor
 - Interact for high level discrepancies
 - Create enhancements to the software to streamline the work flow (discuss Mainframe Merge)

Tumor Registry Manager Responsibilities (cont)

- Staffing
 - Mentor lead abstractor to handle the day to day operations
 - Communicate with staff regulatory changes and hospital wide quality measures
 - Create and institute quality assurance measures, CP3R and Equip
 - Monitor edit error rates
 - Assure staff has required tools to complete their jobs
 - Staff education to ensure familiar with treatment

Tumor Registry Manager Responsibilities

- Initiatives
 - Create concurrent abstracting procedure issues:
 - How to systemically track incomplete abstracts
 - Continually relooking up patients to add information, etc
 - What to do with backlog, how do we catch up
 - When do we abstract, immediately, 1 month from date of 1st contact

Tumor Registry Manager Responsibilities

- Initiatives
 - Create Quality position
 - Handle the quality of data
 - Create reports for requests,
 - Assure data is concise and complete
 - Identify documentation discrepancies

Tumor Registry Manager Responsibilities

- Instrumental in creating an Enterprise Data Warehouse
 - Lead for importing Tumor Registry data
 - Patient's information will be in one location
 - Complete data pulls

Tumor Registry Manager Responsibilities

- Instrumental in creating an Enterprise Data Warehouse
 - Data users can contact one individual/area to obtain information
 - Disadvantages
 - Duplicate information
 - Conflicting information
 - Garbage in, Garbage out

Class of Case

- Analytic
 - Cases diagnosed at the accessioning facility and/or administered any of the first course of treatment there after the registry's reference date. Analytic cases class 1-2 are included in the treatment and survival analysis.
- Nonanalytic
 - Cases accessioned at the accessioning facility for recurrent or progression of disease. All first course of treatment done elsewhere. Nonanalytic cases (class of case 3-9) are not usually included in the routine treatment or survival statistics. The Commission on Cancer does not require registries in approved programs to accession, abstract, or follow these cases.

Data Uses

Data Information Request Log

- Purpose: Data from the tumor registry is used for special studies to assist medical and administrative staff in managing patients and services effectively. A data request/usage log is maintained for these requests.

Reasons for a Request

- Comparison with national and state registries
 - Treatment
 - AJCC staging
 - Incidence by site
 - Clinical Trials
 - Follow up
 - Updating databases

Types of Data Requested

- Race and ethnicity
- Number of specific site (exp lung) in a specific timeframe
- Histology
- Class of Case
- Status of last contact, expired or alive
- AJCC TNM staging

Examples of a Data Request

- Incidence of race and sex for all analytic 2006 cases
- Histology for FY2006 breast cancer patients for a grant
- Breakdown of all cancer patients for FY2006 for the Cancer Program Annual report

Examples of a Data Request

- Class of case and AJCC staging for all breast patients FY2001-2003 for trending
- Follow up for database updating, provided list of their patients
- Incidence by class of case for all endometrial cancer patients FY1992-2004 for a clinical trial

NCDB Benchmark Elements

- 5 year survival by AJCC stage
- Breast and colon cancer by first course of treatment
- Prostate cancer stage by race by age
- Age, gender, race, stage, histology, first treatment, surgical procedure

NCDB Benchmark Elements

- Geographical area: all States, ACS division, State
- Hospital Type: Community Care Center, Comprehensive Cancer Center, Teaching/Research, Other
- Diagnosis years 1998-2004

Data Uses

- Completion of committee dashboard
 - Reflects NCDB CP3R and E-quip measures
 - Survival analysis and comparison
 - Staging compliance
 - Surgical volume

IRB Approval

- All requests that provide patient identifiers, exp name, mrn, ssn
- Any request for patient information other than your own patients or list of your patients

Summary

Websites

- American College of Surgeons
– <http://www.facs.org/cancer/index.html>
- National Cancer Data Base
– <http://www.facs.org/cancer/ncdb/index.html>
- SEER
– <http://seer.cancer.gov/>
- Northwestern Memorial Hospital
– <http://www.nmh.org>

Questions?

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Thank You!
