Innovator Case Studies: Community Hospitals

Paul R. O’Dea
Executive Director
Cedars-Sinai Outpatient Cancer Center
at the Samuel Oschin Comprehensive Cancer Institute
Vice President, Aptium Oncology, Inc.

Angela Blackburn
Vice President, Clinical Operations, Mary Crowley Cancer Research Centers
Vice President, Aptium Oncology, Inc.

Cedars-Sinai Outpatient Cancer Center

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Los Angeles, California
The Aptium Oncology Network

- Alta Bates Summit Medical Center
  Berkeley, CA
- Cedars-Sinai Medical Center
  Los Angeles, CA
- Desert Regional Medical Center
  Palm Springs, CA
- Mount Sinai Medical Center
  Miami Beach, FL; Aventura, FL
- Boca Raton Community Hospital,
  Lynn Cancer Institute West Campus
  Boca Raton, FL
- NYU Cancer Institute
  New York, NY
- St. Vincent’s Hospital Manhattan
  New York, NY
- Trinitas Hospital
  Elizabeth, NJ

Cedars-Sinai Medical Center
Cedars-Sinai Medical Center

- Community/Teaching Hospital
  - 952 licensed beds; 26 operating rooms
  - 2.5 million square feet
  - Inpatient units in two adjacent towers
  - ICU beds in separate newly constructed tower
  - Outpatient services in multiple buildings
  - Dedicated research building
Cedars-Sinai Medical Center

- Outpatient Cancer Center
  - Contract with Aptium to build and manage – 1984
  - Completed – 1988 – 53,000 Square feet
    - Lower Level of the North Tower
    - Open 24/7
  - Expansion to 74,000 Square feet
    - Faculty/Private Attending in contiguous office space – 2005
    - Lab, MD Office, Exam Room, Infusion Center expansion
    - Phased Construction – beginning in 2007
  - Addition of Gamma Knife in nearby location - 2006
Cedars-Sinai Medical Center

- Cancer Center Capabilities
  - Exam Area 15 rooms - expanding to 25
  - Dedicated Laboratory (70% of tests)
  - Dedicated Pharmacy
  - Dedicated Radiology
    - CT
    - Digital X-Ray
  - Infusion Center
    - 17 Private rooms
    - 5 Chair infusion room
    - 18 Central Chairs
    - Expanding to add 13 infusion chairs
Cedars-Sinai Medical Center

• Cancer Center Capabilities
  – Radiation Oncology
    • In/Outpatient (5%/95%)
    • 3 Linear Accelerators (one being replaced)
    • HDR Brachytherapy Afterloader
    • Superficial X-Ray
    • Gamma Knife
    • Trilogy (12/2007)

Physicians

• Radiation Oncologists – offices in the Cancer Center - 3
  – exclusive professional services contract

• Faculty – offices in the Cancer Center - 10
  – Employed by CSMC
    • Division Chief – 1
    • BMT/SCT/Hematology – 3
    • Pediatric Oncology – 2
    • Gynecologic Oncology - 4
Physicians

• **Private attending** – offices in the Cancer Center - 18
  – Pay rent for administrative office
    • Surgical Oncologists – 4
    • Gynecologic Oncologist – 1
    • General Surgeon – 1
    • Plastic Surgeon (Breast Reconstruction) – 1
    • Medical Oncologists – 10
    • Psychiatrist – 1

• **Nurse Practitioners** – space in the Cancer Center - 2

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Physicians

• **Medical Group** – offices off site - 2
  – Employed by Cedars-Sinai Medical Group
    • Medical Oncologists – 2

• **Prostate Cancer Center** – located in adjacent building - 2
  – Faculty – employed by the Medical Center
    • Medical Oncologists – 2

• **Members of the Hematology Oncology Division** – 29
  – Private attending
    • Offices located in various off campus locations
    • Medical Oncologists - 29
Organizational Chart

Medical and Executive Director Duties
Competitive Analysis

• Surrounded by three NCI-designated comprehensive cancer centers:
  – UCLA
    • 4.5 driving miles
  – USC Norris
    • 14.5 driving miles
  – City of Hope
    • 34 driving miles

• Saint John’s - John Wayne Cancer Center
  – 9 driving miles

• Private attending physicians’ “Cancer Centers”
  – two within one mile

Innovations

• Open twenty four hours a day
  – Prolonged chemotherapy (outpatient stays up to 24 hours)
  – Initiation/titration of pain management modalities
  – Emergent (not emergency) cancer care
    • For example:
      – Intractable nausea and vomiting
      – Febrile neutropenia
      – Dehydration
      – Sudden onset of pain
      – Etc.
Innovations

• **Most services located on one floor**
  – Physician/nurse/supportive care office visits
  – Laboratory
  – Pharmacy
  – Infusion therapy
  – Radiation Therapy
  – Dedicated cancer patient imaging (CT and X-Ray)
  – Other imaging (e.g., PET/CT, MRI, Ultrasound, etc.)

Innovations

• **In-house cancer supportive care**
  – Pain management
  – Psychosocial (Psychiatry, Social Work, Child Life)
  – Nutrition
  – Complementary medicine

• **Maintain highly competent nursing staff**
  – Incentives for receiving Oncology Certified Nursing (OCN) designation
    • 92% of the full time RN staff is OCN certified
Innovations

• **Gamma Knife Capabilities – late 2006**
  – Support a growing neurosurgical program
  – Only unit located on the “westside” of Los Angeles

• **Cancer Institute Director – late 2007**
  – Build cancer service line as a unified program

• **Dedicated Cancer Phase I Trial Unit**
  – Coming in 2008

Innovations

• **Others:**
  – Commenced collaboration with Health Care Design to create a “healing environment” in 2003
  – Partnered with architectural, interior design and art firms whose focus is healing environments
  – Created new position to optimize flow and patient satisfaction
  – Launched niche programs for Sarcoma and Carcinoid
  – Surveyed cancer center physicians for satisfaction
  – Hired way-finding consultants
  – CARE program
Mission Critical

• Maintain referrals – generate new patients
  – Innovations
  – Differentiation from competitors
  – Early adopter of technology
  – Program evaluation
  – Kaizen-like process evaluations

• Maintain a favorable payor mix and contracting

New Patients

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A “Clinical Operating System” for Today’s Cancer Center

Angela Blackburn
Vice President, Clinical Operations
Mary Crowley Cancer Research Centers
Agenda

- About the center
- Needs & challenges
- Solution
- The road ahead
- Lessons learnt

About Mary Crowley

- Non-profit, founded in 1992
- Mary Crowley Network includes Central Clinic and 8 other affiliate sites around the country
- 3,000+ patients treated to-date
- 200+ investigative drugs, 140+ FDA approved studies
Expanding Patient Treatments

• The Mary Crowley Difference
  – Patient Experience
  – Innovative Research
  – Non-toxic Targeted Therapies
  – Personalized Treatment
  – Expanded Community Access
  – Partnership with Patients’ Existing Oncologists

The Network

Mary Crowley Cancer Research Centers

SMO (Site Management Organization)

Clinic

Pharmacy

Lab

Billing

External Labs

Baylor Hospital

Transcription Service

TOPA

Business Partners

Sponsors

Affiliate Sites

Tyler, TX

Greenville, SC

Albany, NY

Dayton, OH

Billings, MT

Dallas, TX

Sponsor-1

Sponsor-2

Sponsor-3

Sponsor-4

Sponsor-5

Sponsor-n
Unique Requirements

• Centralized clinical trial management
  – Secure yet “connected” to all affiliate sites
  – Direct sponsor interaction for billing and case report forms

• Specialty cancer EMR for clinic
  – Support rapid conversion of paper records from PCPs, Labs and Referring Physicians to electronic scans
  – Combine traditional treatment plans with clinical trial and translational treatment protocols
  – Connect to labs, pharmacy, sponsor systems, scheduling

Challenges Faced Before New System

• Long patient wait times due to reliance on physician’s ability to match incoming patient to one of 50 open protocols

• Large number of data discrepancies and costly “queries” due to disparate systems – EMR, Labs, Patient Scheduling and CTMS

• Significant missed/late revenue due to manual sponsor billing

• “Paper” everywhere!
Disconnected silos of information made it impossible for doctors to get a single picture of patient record, let alone manage a comprehensive treatment plan.

- Independent assessment by Net.Orange to prioritize projects based on:
  - Projected benefits
  - Estimated cost/effort
- Slotted projects into incremental 3 month releases
- 1-2 month test cycle with limited sites/users
Solution: Clinical Operating System

Referring Physicians, Patients
Affiliate Sites
Clinic Physicians, Nurses
Sponsors
Finance

Role-based Portals

Clinical Operating System

Partner systems

NetOrange (cOS Trials)
Antek (LabDaq)
NetOrange (cOS TheraSystem)
PCS (Rx3000)
Microsoft (Great Plains)
Pract. Mgmt
Compa
NetOrange (cOS TheraSystem)

Role-based Portals

NetOrange (cOS TheraSystem)

Partner systems

NetOrange (cOS TheraSystem)

Role-based Portals

NetOrange (cOS TheraSystem)
Benefits of a cOS for Mary Crowley

• Built for growth (new systems don’t need to be interfaced to each system)
• Better patient-study matching
  – Reduced wait times
  – Better fit studies
• Ability to track genomic profiles of patients
• Faster sponsor billing, cash cycles
• Support for adaptive trials and eCRF needs

Roadmap Ahead for Mary Crowley

• Expanding the network with 5 more new sites
• Rollout of the Oncology EMR
• Interfacing devices to the cOS
  – Varidex CellSearch (circulating tumor cells)
  – Affymetrix GeneChip
  – Proteomics tool
  – Translational pathways tool
Contact Us

Paul R. O'Dea  
Executive Director  
Cedars-Sinai Outpatient Cancer Center at the Samuel Oschin Comprehensive Cancer Institute  
8700 Beverly Blvd.  
Los Angeles, CA  90048  
Tel: 310.423.0600  
paul.odea@cshs.org  
podea@aptiumoncology.com

Angela Blackburn  
Vice President, Clinical Operations  
Mary Crowley Medical Research Center  
3535 Worth St.  
Collins Bldg, Suite 302  
Dallas, TX 75246  
Tel: 214.6581967  
ablackburn@marycrowley.org