Community Oncology 2.0 Information Technology – A Practical Guide: Navigating from Today to Tomorrow

Lucio Gordan, MD
Florida Cancer Specialists
Medical Informatics and Integrated Clinical Services

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Disclosures:

- Executive Board Florida Cancer Specialists
- FLASCO, Secretary
- Director Medical Oncology, NFRMC-HCA Gainesville FL
- Customer Advisor for Altos (OncoEMR) – no financial relationship
- Data slides – adapted from Susan Weidner, ION Solutions
About Florida Cancer Specialists

- Largest privately owned oncology/hematology practice in the United States
- 81 offices (including Pathology)
- 163 physicians (135 partners)
- 100+ nurse practitioners and physician assistants
- 1,824 employees
About Florida Cancer Specialists
The Future is Bright

Enhanced Cancer Therapeutics

Better Molecular Understanding

Targeted Therapies

Improved Palliative Care

Quality of Medicine
The Challenges:

- Cost: prohibitive + unsustainable rate of growth
- Fragmented care
  - Multiple moving parts
    - Heterogeneous outpatient and inpatient models
    - Geography is vast
    - Social and educational differences
    - Economic disparities by individuals, cities, counties, states and larger regions
    - Difference disease states, treatments, complications
- Market competitiveness
- Reimbursement constraints, legal and operational burden
Health care spending has grown much faster than the rest of the economy in recent decades.

MEDLINE-indexed articles published per year


THE HUFFINGTON POST
ONLY AN ONCOLOGIST CAN HANDLE !
Why IT can help Oncology in the 21st Century?

- Because is too COMPLEX
- Oncology is the IDEAL model
  - Ingredients:
    - Cost of drugs
    - Change in Reimbursement
    - ACA
    - Increase in aging population
    - Shortage of oncologists
    - Burn out rate
    - Legal pressures
      - Compliance
      - Hipaa
      - Litigation
    - Others
New “Staging System” in the economics and delivery of Oncology Care

- Value-based care
- Bundle payment
- Episodic Care
- Population Health Management (PHM)
- Shared Savings
- Pay for performance (P4P)
- Global capitation arrangements
- Accountable care organizations
- Medical Homes
How Can IT in Oncology Really Help Us?

- “Trust me, I am a very good and efficient doctor”
- Today’s reality:

- ELECTRONIC MEDICAL RECORDS
- PATIENT PORTAL
- PATHWAYS
- DATA HARVESTING
Solution: must be local
Electronic Medical Records

- **Oncology**: about 70% adoption of EMR
  - 50% Oncology-specific EMR

- **Functionality:**
  - Visit notes (concise, aesthetic and content-meaningful)
  - Different ways of populating a note
    - Typing, dictating, voice recognition, macros, dragging data and others
  - Capture important information
    - Diagnosis, staging, current treatment, intent, line, duration of Rx, demographics, toxicities, history, PE, and assessment/plan
Electronic Medical Records

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Electronic Medical Records

- **Ordering**
  - Labs, radiology, pathology, records, referrals
  - Chemotherapy, other therapeutics, hydration, medications, antibiotics

- **Billing**

- **Metrics**
  - Data export, sharing, graphics, compliance with regimens or pathways
Electronic Medical Records

Content

- Chemotherapy orders divided by sections:
  - Diagnosis
  - Disease setting: curative vs. non-curative
  - Regimens vetted by institutions like NCCN, ASCO or others
  - Embedded orders for laboratory and imaging studies as needed
  - Ancillary medications (anti-emetics, growth factors, electrolytes, IVF, others)
Electronic Medical Records

- Content

  - Research protocols
  - Alerts for interactions, abnormal laboratory results
  - Connection to resources like uptodate.com, NCCN guidelines, medical journals
  - Ability to print out educational materials provided by well-known institutions
  - Ability to adhere to pathways
Electronic Medical Records
Electronic Medical Records

- SPECIFIC to Oncology
- Excellent implementation and product support
- Superior follow-up and responsiveness to MD needs
Data from market and research firm MPI Group

- All specialties
  - 73% of largest practices would have chosen a different EMR
  - 66% of IM specialties would not purchased a different system
  - 50% = “cost is too high”
  - 45% = “care is worse”
Data from market and research firm MPI Group

- 69% = no improvement in care coordination with the hospitals
  - Interference with face-to-face care
  - Less fulfilling work
  - Degradation of quality of clinical documentation
  - Less efficiency
  - Change in career satisfaction
How to choose an oncology-specific-certified EMR?

- [http://www.klasresearch.com/emr_software](http://www.klasresearch.com/emr_software) (KLAS)

- ASCO booth

- Oncology Electronic Health Record Field Guide

- Contact different practice leaders; consulting services

How to choose an oncology-specific-certified EMR?

- GPO’s
- Vendor demonstration

- Is there a best EMR in oncology?
  - Decision is local, size, number of clinics
  - Other specialties (radiation oncology, surgical oncology, pathology)
  - Cost
  - Alignment with local interest (hospital vs other practices?)
What are some of the players?

- Epic Systems Corporation
- McKesson / US Oncology
- Elekta - IMPAC Medical Systems, Inc.
- Altos Solutions, Inc.
- Varian Medical Systems
- Allscripts
- Partners Healthcare System
- NextGen Healthcare
- GE Healthcare
- UT MD Anderson Cancer Center
- Cerner Corporation
EMR attributes for the present or near future

- Mobile adaptability (apps)
- Ability of really collecting and export metrics
  - Toxicities, PFS, OS, toxicities, patient demographics, disease molecular nuances
  - Cost of treatment (bundle payment, at risk contracts, value-based cancer care, other models)
  - In-built pathways
  - Clinical research!
- Increased efficiencies within offices

SOLUTION:

- VENDOR – PRACTICE RELATIONSHIP
- PRIORITIZATION OF PROJECTS
Patient Portal

- Enhancement and development are needed
  - Appointment scheduling
  - Patient – office messaging
    - New problems
    - Medication refills
    - Questions
  - Patient education access via vetted materials within the portal
  - Intake forms (demographics, history, past medical history and others)
  - Updated medication list
  - Financial counseling, electronic signatures, consent forms
- Support
  - Foundations
  - Support groups
  - Ancillary service
Patient Portal

- Increased efficiencies
- Less burden on staff
  - Adaptability to each practice
- Less burden on providers
- Improved information exchange
  - Patients with lab, radiology reports
  - Improved cost by avoiding duplication
  - Better quality of care
- Empowering patients and families
  - Education
  - Satisfaction
  - Responsibility
Pathways

- **Definition:**
  - Detailed, evidence-based, physician-generated, institution-vetted management tool to assist in standardization of choice of chemotherapy drugs, dosing, schedule, and ancillary studies

- **Cons:**
  - Cookie Cutter medicine?
  - Generalization of care instead of personalized?
  - More computer time?
Pathways

Pros:

- State of the art care;
- Standardization of approaches but with specific and personalized care;
- Potential improvement in research accrual
- Safety
- Cost prediction
- Cost containment
Pathways

- Practices have distinct:
  - Geography
  - Payer mix
  - Market forces
  - EMR capabilities
  - Physician “outlook” or goals
  - Relationship with payers

- One size does not fit all
Pathways

- Ideally deployed from EMR for each payer, each disease, staging, curative vs non-curative intent, molecular features

PROCESS

- NCCN
- ASCO
- Institution-built pathways
- UPMC
  - Via Oncology
- USONC
- P4 Healthcare
- Others
Do pathways work?

- “Done right, it has to”
  - Quality
  - Safety
  - Cost estimation
  - Allocation of resources

- Fee-for-service =

- “Value-Based Cancer Care”
  - Tools
  - Metrics
  - Results
Examples:

- **Aetna study**
  - 35% decrease in cost of management of NSCLC patient for 12 months with same overall survival

- **BCBS/UPMC**
  - Major cost reduction by better use of resources
    - Drug selection
    - Laboratory
    - Radiology

- More publications are forthcoming and needed
Can pathways prevent medical errors, improve career satisfaction in Oncology?

- **Time is short**
  - Patient load
  - “Extra-curricular” obligations

- **Data is geometrically expanding**
  - Many thousands of publications per year
  - Number of journals
  - Meetings

- **Complexity of medicine**

- **Intricacy of business of oncology**
Payers and pathways

Figure 1. Payer plans to implement oncology clinical pathways

- Does your plan have clinical pathways in place for oncology?
  - Yes, 40.4%
  - No, 59.6%

- When does your organization plan on having pathways in place?
  - <1 year, 9.7%
  - 1-2 years, 25.8%
  - 2+ years, 22.6%
  - Not considering at this time, 41.9%

Source: Reimbursement Intelligence Oncology Series, 2012
Data Harvesting

- Is the data in our practice worth anything?
Data

- BIG DATA = today is a big headache
  - 2.7 zettabytes of data exist in the digital universe today
  - 35 zettabytes of data will be generated annually by 2020
  - 60% growth in structured and unstructured data annually
- Poor data can cost businesses 20-30% of their operating revenue
- Unavailable or wrong data costs US businesses $600B annually
- Poor data or “lack of understanding of the data” are cited as the #1 reason for overrunning project or initiative costs
The Challenge

- Analysis of large datasets, much of it is unstructured
  - Physician notes
    - Diagnosis, staging, treatment intent, line of treatment
    - Toxicities
    - Assessment and Plan
  - Radiology reports
  - Some labs and pathology (when imported as an image – PDF)
- How to extract such data:
  - Manually?
  - Automated – optical reading and computer analysis
    - Do we have such technology?
  - Hybrid systems
Who may want our data?

- Pharmaceutical R&D
  - Patterns of practice
  - Real world toxicities
  - Duration of therapies

- Payers
  - Diagnose opportunities of decreasing hospitalizations, ER visits
  - Management of drug expenses
  - Coordination of care via multiple services
  - Patient access to care
  - Risk-saving-sharing contracts

- Oncologists
  - Quality of care delivered
Who may want our data?

- Oncologists
  - Understand your patient population
  - Size, growth trends
  - Higher risk patients
  - Evaluate economic situation
  - Current cost by disease state
  - Incorporation of additional procedures/tests to ensure drug coverage
  - Being able to demonstrate the quality of care
Who wants our data?

- Research Networks
  - Analysis of patient population with specific diseases
  - 3% US enrollment in trials!
- Practice management companies or services
  - Data can drive better analysis of cost
  - How to allocate resources
- GPO’s
  - Volume, type of drug, supplies
  - Better contracting
- Benchmarking
  - Intra and inter-practices attributes
Who wants our data?

- **Billing & Accounting**
  - Payment estimations and planning
  - Improvement of denial rate and resolution times
  - Betterment of financial effectiveness and operations
    - Less cost
    - Less personnel
    - Shorter billing/revenue cycle
$300,000,000,000.00 annually
Who can benefit from data?

Possibly all of us, BUT:

- Larger practices
- Vaster geographical distributions
- Electronically savvy practices
- More structure data
  - Charts
  - Ordered tests
  - Results
  - Costs
- More interfaces with laboratory, pathology

- Practices with real data harvesting tools or vendors
Critical

- Large aggregated data
  - Meaningful and diverse patient populations
  - Allow comparative information
- State-of-the-art analytic tools
  - Hardware
  - Software
  - Statisticians
  - Data professionals
    - Collection of raw data
    - Transform in a meaningful product
    - Devise predictive models
    - Monetization by different parties
Data = is it a gold mine?
Who can help your practice with data?

- EMR
- GPO’s
- Data companies
- Others
Take Home Message

- EMR
- PATIENT PORTALS
- PATHWAYS
- DATA

SUCCESS:
- CRITICAL MASS
- QUALITY AND DELIVERY OF CARE
- REAL VALUE PROPOSITION
- METRICS AND BENCHMARKING
- CARE READY
- DEAL-RISK READY CONTRACTS
Thank you

LGORDAN@FLCANCER.COM

352-332-3900