Changing Your Oncology Information System
A Detailed Process and Lessons Learned

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Disclosures

- None
FYI

- This is **NOT** a presentation on which EMR is better
FYI

- This is **NOT** a presentation on how to use your EMR
History: Mixed vendor department

- Mosaiq department for over 15 years
- Two Varian treatment machines, purchasing one more
  - OBI and ExacTrac on one machine
  - Portal Vision and ExacTrac (robotics) on one machine
- Pinnacle and Eclipse
- MIM
- Variseed

- Would a single vendor solution be acceptable?
Multi-vendor positives

- More efficient pricing opportunities
- Smaller companies can offer more flexibility for manipulating their software
  - Getting harder to find smaller companies
- Not beholden to limitations of a single vendor problems
- Greater possibilities for customization
  - Software
  - Workflow
Multi-vendor negatives

- Multiple contracts to juggle
- Multiple upgrades to juggle
  - Potential conflict with software versions
- Confusing for new employees
- Constant transfer of data between systems
- Many “workarounds”, rather than fixes
  - “First click here, then type this, download this, then click here, etc.”
- Who do you blame for hardware/software conflicts?
Single-vendor positives

- A single point of contact for all service-related calls and hardware/software questions.
- Common database for R/V and treatment planning system, no transfer of data
- R/V system is designed to interface with treatment machines and planning system
A choice is upon us...

- **Purchase of a TrueBeam:**
  - Go with Mosaiq, keep warm fuzzy feelings of our comfort zone...lose some functionality
  - Go with ARIA, increased functionality with machine, decrease data transfer, but warm fuzzies are tossed out the window

- **Purchase of Versa HD:**
  - Keep Mosaiq
  - But...still left with a Varian planning system...for a long time
New equipment team - LINAC

- One therapist, one physicist, one in-house IS/biomed
- Goal was to gather **un-biased** information about each vendor

- Three site visits (2 Varian and 1 Elekta)
- Multiple vendor presentations in-house
- Numerous discussion with **vendors and users** at national conferences

- Department-wide meeting discussing all data collected
Decision made-LINAC

- Go with TrueBeam
Decision made-R/V system

- Go with ARIA
  - Efficiencies with single vendor
  - Better interface with all three treatment machines
  - Better interface with treatment planning system
  - Declining Mosaiq phone support over the years

- Final decision March 2015

- This decision was not taken lightly!
ARIA Transition

PHASE I: NEW ARIA WITH MOSAIQ MIGRATION
- Project Initiation: 20 days
- Technical Strategy: 71 days
- Implement ARIA RD: 213 days
- Mosaiq Migration: 181 days
- EPIC Interfaces: 141 days

PHASE II: TRUEBEAM, ECLIPSE EXPANSION AND ARIA 13 UPGRADE
- Technical Strategy: 67 days
- E-box Upgrade: 52 days
- Training/Prep: 69 days
- Eclipse Expansion: 128 days
- ARIA 13 Go-Live /Closeout: 37 days
- Implement Truebeam: 78 days

Timeline:
- ARIA Go-Live: Mar 2015
- ARIA 13 Go-Live: Nov 2016
- Truebeam Go-Live: 2016
ARIA Transition

- Basic steps of the process
  - ARIA servers built (Citrix)
  - EPIC interfaces built
  - ARIA configured
  - Training completed
  - Time to practice
  - Mosaiq demographic/scheduling migration
  - Patients under treatments migrated
  - Go-Live
  - Mosaiq document and RT record migration
ARIA Transition – Super users 1

- Select a multidisciplinary group of super users
  - Manager
  - Information Systems
  - Physicist
  - Therapists (3)
  - Dosimetrist
  - Nurse
  - Scheduling staff
  - MA
  - Physician
ARIA Transition – Super users 2

- Super user responsibilities
  - Meeting with same-level staff about workflows
  - Making final decisions about same-level staff workflows
  - Training of all same-level staff
  - Troubleshooting when issues arrive during Go-Live
And we have a small department!
ARIA Transition – Sys Admin

- System administrators
  - Three physicists
  - Rad Onc staffed IS/service engineer
- The only people with access to configuration settings
- “Who is making changes and why?”
- Workflow eventually setup where any change to the system would require meeting with all four system administrators
EPIC/ARIA Interfaces 1

- Scheduling into ARIA
  - Simulations, HDR treatments, Iso-verification treatments, SBRT/SRS treatments
- Scheduling out of ARIA
  - Daily radiation therapy appointments
- Demographics into ARIA
- Billing out of ARIA
  - All billing is completed in ARIA based on tasks completed, then exported to EPIC
- Documents out of ARIA
- Documents into ARIA
EPIC/ARIA Interfaces 2

- Created an interface team
  - GHS Rad Onc IS
  - GHS Rad Onc coder (<knowledge of scheduling procedures)
  - GHS Rad Onc physicist
  - GHS Interface programmer
  - GHS EPIC scheduling super user
  - GHS EPIC billing super user
  - Varian IEM specialist
EPIC/ARIA Interfaces 3

- Weekly interface team testing sessions in ARIA and EPIC test environments
- Making changes in ARIA is not a huge deal
- Making changes in EPIC is a BIG deal
  - Negotiating “change freezes”
- Once acceptable, changes were moved to production environments
- Constant monitoring of issues that arise with e-mail communication and occasional meeting with interface team
Varian Site Survey

- How do we use Mosaiq
- How is our departmental workflow
- How will we fit our workflow into ARIA?

- A formal report was given by Varian
Configuration of ARIA

- Varian on-site for basic explanation of process (8/25) (3 days)
- GHS staff finished configuration (9/21) (19 days)
  - Activities, codes, staff, resources, schedules, care paths, check lists, encounters, etc.
- EPIC interfaces live
  - ADT (9/28)
  - Scheduling (10/12)
  - Billing (10/12)
Training of staff

- Varian on-site for basic training to all users (9/22) (3 days)
- GHS staff trained by “ARIA Experts” and super users (9/28-10/9) (10 days)
  - WebEx presentations
  - Conference room simulated scenarios
  - Vendor supplied videos
The Passing of Mosaiq (10/9)

Mosaiq

The OIS that was always there when you needed it.

1999 - 2015
Limbo (after Mosaiq, before ARIA)

- Two days spent transferring all currently treated patient data to new ARIA servers
- Reconcile patient data between Mosaiq and ARIA
- Chart checks on everyone
- Acceptance test a new 4DTC
- Mode up all patients on treatment machines and verify parameters
- Three physicists, one dosimetrist, three therapists
- Almost 100 hours put in between two days
One would think this would have been the case
Instead, everything went relatively good
Mosaiq Migration

- Mosaiq contains all patient data for the last 15 years
- We do NOT just want to lose that data
- Decision was made to keep all of it
- Everything except patient images would transfer

- Ultimately we decided to keep Mosaiq hidden away
  Just in case
Mosaiq Migration

- Typically, Mosaiq is entirely migrated prior to ARIA Go-Live
- Our limited time crunch left us with the option of migrating the data after ARIA Go-Live
- Some stuff done
  - Scheduling
  - Patient demographics
Mosaiq Migration

- Patient documents
- RT treatment data
- If we ever want treatment images, we’ll need to go back to Mosaiq
Hindsight 20/20 - Bad Timing?

- Near record patient volumes during Go-Live and subsequent months
- Treating 7:30am to 9:30pm
- SBRT/SRS treatments
- 2014 - 88
- 2015 - 190
- Q1 2016 - 81
Thank you