THE CLASSIC HOLDS TRUE

“It was the best of times, it was the worst of times, it was the age of wisdom, it was the age of foolishness, it was the epoch of belief, it was the epoch of incredulity, it was the season of light, it was the season of darkness, it was the spring of hope, it was the winter of despair.”

Charles Dickens, A Tale of Two Cities 1859

THE FEMTO REVOLUTION

TIMELINE

2005 Femtosecond cataract surgery is conceptualized
2008 First femtosecond laser procedure performed in Hungary
2010 First femtosecond cataract procedure performed in U.S.

(FDA approved model by Dr. Steven Slade on Feb 26, 2010

April of 2013, over 125,000 femto cataract procedures worldwide, most of which took place in the U.S.

THE FEMTO REVOLUTION

2014 September article in Ophthalmology Business states that femtosecond cataract procedures account for less than 5% of all cataract procedures performed in this country.

- Ophthalmology Business article:
  Blurred Line, Sharp Focus by William B. Rabourn Jr., and Louis Pennow, MBA, BSHA, AP

THE FEMTO REVOLUTION

Still, the procedure continues to gain momentum into practices across the U.S., and vendor advertisements continue to educate patients on the safety benefits of a more precise procedure.
THE CATARACT LASER MARKET
- Catalys by Abbott Medical Optics (previously Optimedica)
  Approved for anterior capsulotomy, fragmentation, and corneal incisions
- LensAR by LensAR, Inc
  Approved for anterior capsulotomy, fragmentation, and corneal incisions
- LenSx by Alcon
  Approved for anterior capsulotomy, fragmentation, and corneal incisions
- Victus by Bausch & Lomb Technolas
  Approved for anterior capsulotomy, fragmentation, and corneal incisions

IS IT TIME FOR FEMTO?
- Are you located in a competitive market?
- Do you have enough space within your ASC?
- Can you sustain current volume with the added process?
- Evaluating the model, can you afford it? Will your patients opt to afford the additional expense? Will your femto volume warrant the implementation?

START YOUR OWN NOVEL
- Research your choices – know the products and services
- Visit sites that currently use the technology
- Ask questions and learn from others' experiences
- Narrow your options based on facts and observations
- Ensure that all parties are comfortable with the final decision
- Set pricing for what works best for your practice
- Build protocols supporting “what ifs”

ARE YOU really READY?
- SPACE
  Consider size, dedicated bed, physical room requirements
- STAFFING
  Adequate number, cooperative, creative
- FLOW – VOLUME
  “Typical” surgery day will be hard to accomplish
- PHYSICIANS
  Dedicated to the process and skilled with equipment
- SYSTEMS CHALLENGES
  Make the unexpected, expected! Needed protocols

START YOUR OWN NOVEL
- In the end, the future will be about bladeless cataract surgery
- Only your practice can decide if the future is NOW

IT'S UP TO YOU TO WRITE THE ENDING AND HOPEFULLY A HAPPY ONE!

START YOUR OWN NOVEL
- Build a femto implementation team, members including
  - Nurses
  - Technicians
  - Surgeons
  - Administration
- Freestanding surgery centers
  Need to ensure communication with surgeon’s practices
  Success relies heavily on clinical practice ability to promote upgraded services
SPACE

- Flooring and ceiling types must be evaluated
- HVAC system must be heavily monitored and controlled for temperature and humidity
- Dimensions of room must be reviewed for proper placement of laser and flow of staff and patients
- Best design for efficiency is within the ASC

SPACE

- The femto won’t fit in the ASC?
- Leads to additional compliance issues
- Complicates flow more dramatically
- Extends the patient’s overall surgical visit
- Negatively impacts staffing
- Stresses the need for additional measures for patient safety

STAFFING

- Communicate and focus on team effort
- Admit fears and plan for success
- Ensure adequate numbers
- Promote an atmosphere of team problem solving
- Keep a sense of humor!

STAFFING

CONSIDERATION FOR FEMTO STAFF

- Tech savvy
- Cooperative with change
- Creative
- Quick to learn new tasks

STAFFING

Concentrate on identifying staff members that can quickly learn new tasks and adapt to change without disruption. If your staff assists in LASIK procedures and are already accustomed to lasers, they are most likely a better “fit” for femto.

STAFFING

- Educate physicians, clinical staff, patient counselors
  - How to promote the new procedure
  - How best to screen for potential patients
  - How to handle “internet questions”
  - Pricing
  - Protocols for potential issues
- Keep everyone in the loop and updated
FLOW & VOLUME

- Dramatically will slow your roll!
- Plan ahead for success
- Choose opportune implementation dates
- Build efficiencies, review processes and adjust
- Implementation is not a race – go slow
- Volume maintenance

FLOW & VOLUME

It will be highly important to gain buy in from administration and surgeons to begin slowly. You can “fragment” it many different ways, but you will definitely need to adjust.

Among the possibilities:
- Schedule template adjusted
- Plan for only a few femto procedures in the beginning
- Multiple surgeons (femto/cataract)
- Combination of any of the above

FLOW & VOLUME

- Expect lead surgeons to be heavy users
- Maintaining volume can be difficult
- Ever evolving process to increase efficiencies
- Additional capacity may be needed
  - Increased surgical time/days for surgeons
  - Decreased clinical time (which can result in impact on cataract volume)

PHYSICIANS

- Currently support premium/upgraded services?
  - Can support better volume of patients opting for femto
- Perform LASIK procedures?
  - Promotes easier implementation with docking/steering
- Dedicated to the process?
  - Works with vendor rep to perfect processes
  - Works with staff for implementation measures
  - Works with patients to guide decision making
  - Works with fellow physicians to promote use and success

PHYSICIANS

- Quickly identify “star” players
- Use these docs as leaders in this change process
- In many cases, this is your lead surgeon
- Important to keep this surgeon in the communication loop
- This surgeon will be key in introducing this new technology

SYSTEMS CHALLENGES

- Training is a major hurdle
  - Depending on device, extensive training may be needed
  - Physicians
  - Every technician designated for femto
- Vendor must be willing to train on your terms
  - Multiple site visits to accomplish desired outcome
  - Evening/early morning training sessions
SYSTEMS CHALLENGES

- Laser errors due to temperature or humidity changes
- Laser calibration errors
  - Additional time for shut down and reboot
- Suction loss with patient interface
  - Additional time for reset
- Patient vs. laser issues
  - Additional time for patient care
  - Screen patients well
  - Review processes for determination of anesthesia need

SYSTEMS CHALLENGES

- Recommend that you negotiate with your contract that there is a technician located in your city or very close to you.
- Request information regarding your technician’s work experience
- If possible, try to make the vendor put the reaction time in writing.
- Lasers are gaining popularity and the engineering/technician staffs are being stretched very thin – can take several days for repairs.

MANTRA

Nothing that we do, is done in vain. I believe, with all my soul, that we shall see triumph.”

Charles Dickens, A Tale of Two Cities 1859

LONDON

A look into the tale of our first femto experience

LONDON OVERVIEW

- ASC located with clinical site
- Advanced technology driven practice
- Upgraded services average 71% of our patients
- 3 primary cataract surgeons with combined LASIK experience of over 56 years
- Highly efficient surgical center with average complete visit time of 52 minutes from admission to discharge
- 9 full time staff members at time of implementation
- 2 ORs with overall small footprint

LONDON OVERVIEW

- Began femto project in August of 2012
- Planned for success with key personnel
- Patient counselors, technicians, surgical staff
- October 16, 2012, laser delivered and acclimated to room
- October 24, 2012, first treatment performed
- April 2014, have performed 450 procedures
LONDON SPECIFICS

- Large system with dedicated bed
- Room temp must be between 64.4 – 75.2 degrees F
- Room humidity must be between 30-50%
- Required 45 minute warm up time (currently 2 hrs)
- Phenomenal real time OCT
- Actual procedure time averages about 4 minutes
  - Depending on planned procedure, times vary

Communication with key personnel promoted seamless transition
- Femto team constructed of lead physician, administrator, patient counselors, technicians, surgical staff
- Reviewed all processes and implemented changes where needed

CHANGES
- Physicians would discuss femto during the exams
- Technicians would support physician discussion
- Counselors would explain femto during consult
- Screen patients (dilation/physical & mental assessment)
- New consents added for femtosecond procedure
- New pricing developed for femto option
- LRI decision

Laser had to be placed outside the facility
- Paperwork changes for complete compliance
- Operative report adjusted
- Staffing pattern
  - Dedicated laser technician
- Additional personnel for femto preop
- Patient safety needs addressed
  - Ambulatory issues after procedure due to vision
  - Additional personnel for patient transport

LONDON TRAINING

- Training process arranged through vendor
  - Set up with delivery and acclimation time
  - 10 eyes per person (physician or staff)
  - Dedicated time for one on one with physicians
  - Dedicated time for group staff (core of 3 techs)
  - Total training hours = 8 hrs over 2 evenings
  - Allowed overtime for staff
  - Training took place the 2 days prior to the first treatment

Vendor was dedicated to the success for our practice
- Provided trainer for multiple surgical days in order to train 3 technicians
- Lead LASIK scrub assisted in first 10 procedures
  - Older staff member, but is COMT
  - Highly experienced with LASIK femtosecond flap equipment
- Additional team consisted of 2 surgical scrub techs
  - Younger staff members, tech savvy
LONDON TRAINING

- Began with only lead surgeon plus 1 “tandem” surgeon
  - Lead surgeon is highly skilled LASIK surgeon and drives advanced technology
  - Tandem surgeon is a medical ophthalmologist with no previous experience with LASIK
    - Tandem physician trained to provide for better flow on high volume day
    - Chosen due to convenience with clinical template

About those other 2 cataract surgeons….
- Did not begin training until mid 2014
- Have not completed 10 eyes

.....LEAD SURGEONS MUST BE ABLE TO SUPPORT THE NEEDED VOLUME!

LONDON SCENE

- October 24, 2012 was the first surgical date
  - Planned for a start date with slower pace
    - “Difficult cat day”
    - Did not adjust template
    - Planned for only 4 procedures using the femto
    - Used 2 additional staff members
    - Successful first day without hiccups
    - Slowed processes as expected

CURRENT LONDON TIMES

- Use of tandem surgeon allows for volume maintenance
  - on high volume days with less stress on surgeon
  - Surgical days with less volume (30 patients) can be stressful
    - Surgeon performs femto also
    - Femto is located on another floor
      - Direction of surgeon/efficiencies
      - Communication of timing for OR readiness

LONDON BRIDGES FALLING DOWN

- STAFFING ISSUES TO DATE
  - Maintain 2 additional personnel, but less “rehearsed”
  - Morale is the biggest issue
    - Efficiencies
    - Laser issues - communication with patients
    - Managing upset patients
    - Handling patient refunds
      - Pricing concerns – what works best

FLOW & VOLUME ISSUES TO DATE

- Countless laser shut downs
  - Destroys surgical template
  - Decreases patient satisfaction with experience
  - Patient having femto have increased wait time
    - Full dilation prior to procedure
    - Extends patient visit time and can crowd lobby
FLOW & VOLUME ISSUES TO DATE
- Surgical volume maintained, but...
  - Patient total visit time with femto averages 1hr 12 min
  - Preoperative femto time
  - Additional "travel" time
  - No additional time in OR truly saved
- Upon admission to ASC, patient presented with PVCs
  - Femto preop protocol changed / EKG monitors placed
  - Preop technician is a paramedic

PHYSICIAN ISSUES TO DATE
- Disappointment in laser performance with shut downs
- 2 surgeons remain untrained
- Suction break issues cause frustration
  - Vendor changed patient interface

SYSTEMS CHALLENGES TO DATE
- Laser technician dedicated to our center not a great fit
  - Magical laser technician was requested, but lives 3 hours away.
- Calibration errors and shut downs resulted in new parts, including an eventual new laser head
  - Continued calibration errors and shut downs resulted in new parts, including an eventual new laser head
  - Continue calibration errors and shut downs resulted in a renewal of contract and a complete new laser
- New laser OCT issues resulted in a "new" new laser
  - Only one of 3 in the U.S.
  - Only 1 engineer trained in the U.S. for installment
  - Only 1-2 vendor technicians trained
  - Forced to renew training for all physicians/staff
  - Additional dedicated training time = 4 hours
  - 10 eyes completed for each

SYSTEMS CHALLENGES TO DATE
- Overall complicated transition with femto outside ASC
  - Employee dedication to the process is key to success
  - Physicians very satisfied with experience when laser performs
  - Staff remains frustrated with recurring issues/cancellations
PARIS

A look into the tale our second femto experience

PARIS OVERVIEW
- Freestanding ASC
- Closely associated with high volume, advanced technology
  - practice (2 surgeons)
- Potential users included 5 additional cataract surgeons
- Patient flow and wait time is slower paced
  - Complete cycle for cataract can take up to 2 hours
- 25 full time staff members
- 4 OR surgery center utilizing only 3 ORs

PARIS OVERVIEW
- Began femto project in June 2014
- Planned for success with key personnel
  - Key ASC managers in conjunction with practice
- September 12, laser delivered and acclimated to room
- September 16, 2014, first treatment performed
- Through March 2014, have performed 216 cases

PARIS SPECIFICS
- Small footprint without dedicated bed
- Room temp must be between 59 – 86 degrees F
- Room humidity must be between < 65 %
- Requires 12 minute warm up time
- Actual procedure time averages about 4 minutes
  - Depending on planned procedure, times vary

PARIS SPECIFICS
- In-house femto team constructed of administrators, lead ASC managers
- Femto team extended to counselors and technicians in the high volume practice though common administrators
- Reviewed all processes and implemented changes where needed

PARIS SPECIFICS
- CHANGES
  - Physicians would discuss femto during the exams
  - Technicians would support physician discussion
  - Pricing developed for ASC, all practices must comply
  - Counselors would explain femto during consult
  - Screen patients for dilation
  - New consents added for femtosecond procedure
PARIS SPECIFICS

- **CHANGES**
  - Laser placed in the unused OR
  - Flow for surgery was adjusted
  - Preop to femto room
  - Each OR constantly “fed” from preop or femto room
  - Always patient ready in the OR
  - Femto operative section added to surgical chart

PARIS SPECIFICS

- **CHANGES**
  - Staffing pattern
  - Dedicated laser technician
  - No additional staff needed due to flow from preop
  - Patient safety needs assessed
  - Patient relaxed on surgibed in preop and remains throughout

PARIS TRAINING

- Training process arranged through vendor
  - Set up with delivery and acclimation time
  - 10 eyes per person (physician or staff)
  - Dedicated time for one on one with physicians
  - Dedicated time for group staff (core of 3 techs)
  - Total training hours = 6 hours
  - Allowed overtime for staff
  - Training took place the day prior to the first treatment

PARIS TRAINING

- Vendor was dedicated to the success for our practice
  - Provided trainer for multiple surgical days in order to train
    - 3 technicians
  - Additional training for additional surgeons easily set up
  - Materials manager/CST was designated as main tech
  - Additional team consisted of 2 surgical scrub techs
  - All older staff members

PARIS TRAINING

- Began with 2 high volume surgeons/our practice
  - Both are skilled LASIK surgeon and drivers of advanced technology
  - Additional surgeons were trained based on volume
  - To date, there are 3 fully trained users
  - Represent the highest cataract volume

PARIS SCENE

- September 16, 2014 was the first surgical date
  - Planned for a start date with slower pace
  - Adjusted template for 6 less patients on day 1
  - Planned for only 5 procedures using the femto
  - No additional staff members were needed
  - Successful first day without hiccups
  - Slowed processes as expected with change
CURRENT PARIS TIMES

- Template has returned to normal
- Femto has become part of the normal flow
  - Averages 30% of the surgical schedule
- Anesthesia accompanies pt from preop to post op
  - Anesthesia services are provided by independent contractors

TOUR DE PARIS

STAFFING ISSUES TO DATE
- Maintain 2 additional personnel
- Morale issues include
  - Efficiencies
  - Traditional change issues

FLOW & VOLUME ISSUES TO DATE
- Laser has only been down
  - Resulting in total of only 2 patient cancellations
- Patient having femto have slightly increased wait time
- ASC cycle times can take up to 2 hours for cataract
  - Femto only adds a total of about 15 minutes

Surgical volume maintained
Anesthesia can provide some sedation if needed
Efficiencies increased within ASC
Patient flow is streamlined
Separate room provides for ability to keep moving into each OR

PHYSICIAN ISSUES TO DATE
- Some surgeons disappointed that they have not been trained
  - Training ongoing
  - Suction break issues cause frustration

All surgeons are satisfied with the laser’s abilities and performance.

SYSTEMS CHALLENGES TO DATE
- Interface issue, no video image
  - Resulting in cancellation of 2 patients
- Minor issue with sensor – humidity
  - Resulting in cancellation of 3 patients
- Footswitch issue
  - Resulting in cancellation of 1 patient
- User error
PARIS SUMMARY

- Overall pleasant transition having inside ASC
- Freestanding ASCs should ensure commitment from physician staff prior to consideration
- Multiple clinical sites/staffs add to complexity
- Physicians and staff satisfied with the experience

THE END

Remember -
“There is prodigious strength in sorrow and despair.”
Charles Dickens, A Tale of Two Cities 1859

Contact info

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