Kundandeep Nagi, MD has no relevant financial relationships with commercial interests to disclose.

Teresita Carrillo has no relevant financial relationships with commercial interests to disclose.

Amy Deason has no relevant financial relationships with commercial interests to disclose.

Natalie Torres has no relevant financial relationships with commercial interests to disclose.

Stephanie Zamarripa has no relevant financial relationships with commercial interests to disclose.
The Team

- Division
  - Kundandeep Nagi, MD
  - Terri Carrillo, COT and Clinic Manager
  - Amy Deason, Clinic Manager
  - Natalie Torres, Surgical Coordinator
  - Stephanie Zamarripa, Surgical Coordinator
  - Clinical Staff and Coders
  - Hope Nora, Facilitator
  - S. Gorden Whiting

- Sponsor Department
  - Daniel A. Johnson, MD, Chair of the Department of Ophthalmology
What Are We Trying to Accomplish?

AIM STATEMENT

To reduce the Department of Ophthalmology's surgical cancellation rate by 50%, by May 1, 2013.
Literature Review Sources

- **MEDLINE search June 2013**: “surgery cancellation”, “cancellation rate”, “ophthalmology department”

11. Haana V, 2009 Sep; 79(9)636-640
Late surgical cancellation is estimated to be at a loss of $100,000 per year, or nearly 1 month of scheduled surgeries in a 2-year period (1) or $4,802 per cancellation.

Of the total causes 41% were considered “preventable” (1,2), 45% “unpreventable”, and 14% “no reason given” (1).

Surgical cancellation rates vary from Ophthalmology ASC 5.3% (1), teaching hospital 7.6% (5), multidisciplinary 500 bedded hospital 17.6% (4), general hospital 23.79% (3).

Surgical cancellation by specialty (3) Orthopedics 26.6% (3), General Surgery 22.13% (3), Gynecology 17.84% (3), Ophthalmology 10.6% (3) - 12% (7).

The commonest reasons for cancellation were unavailability of the surgeons 35.8% (2).

The commonest causes of cases cancellation, power outage/ unavailability of generator backup, linen/sterile instruments not provided, no oxygen, unfit patient (2).

Surgery cancellation leads to an inefficient use of operating room time and a waste of resources at a rate of 3.6% (9).
A Meeting of the Minds...
Process Mapping = Chaos!
Process Analysis Tool – Clean Chaos

Decision for surgery

If SX Date available:
Patient given preop labs, appointment, PCP clearance

Patient sent to SX Coordinator

If date not available, filed to call later

Preop Appt:
Labs abnormal, PCP denies clearance, Patient advises of transportation issues

Preop Appt:
Labs normal, PCP cleared, UPOMC cleared, etc

BC works referral; verifies patient responsibility and eligibility details for surgery

Patient cancels due to financial responsibility

Patient given UPOMC appt; Case posted; referral shell entered to begin INS auth process

Day of Surgery: Patient HR/BP abnormal, anxiety

Day of Surgery: All well / SX performed

SX Cancelled

SX Cancelled

Pt ok to proceed; Case posted, if not done previously

HIGH CANCELLATION RATE
Multiple surgical sites with differing forms, anesthesia, pre-op lab and posting requirements

Differing processes between sites

Limited provider availability/OR time

Shared duties within clinic roles

Delayed patient contact

Limited appt availability

Process Analysis Tool
- Fishbone
Changes we think will create the most impact:

- **Educate**
  1. Provide monthly cancellation reports to physicians; provided by the ASC and Ophthalmology staff.
  2. ASC staff to ensure documented cancellation reasons are accurate and consistent.

- **Optimize**
  1. Outlook Calendar – one schedule, accessible to all, at multiple locations. (Permissions vary per user.)
  2. Patient Surgical Packet to include financial, transportation, medication, and scheduling information

- **Standardize**
  1. Physician based scheduling protocol; CPT’s, special instructions, pre-op labs, etc.
How Will We Know That a Change is an Improvement?

- We will be using two types of measures primarily:
  - Pareto Charts
  - SPC
- We will measure by:
  - Updated monthly reporting; generating accurate documentation of cancellation reasons from the ASC
  - Specialized departmental reports obtained from Outlook Surgical Calendar
- The specific targets for change:
  - Standardized protocol for surgical scheduling including, but not limited to, provider and staff processes, patient education, and precise documentation
Background Data

Reason for Surgery Cancellation

Categories

Number

Provider Request [44]
Patient Request [42]
Feeling Better/Worse [29]
Not Medically Cleared [43]
Financial/Insurance [30]
Schedule Error [32]
Clinic Other [0]
Transportation [31]
Equipment Not Available [40]
Other

23
20
19
11
9
7
6
5
3
5

21.3%
39.8%
57.4%
67.6%
75.9%
82.4%
88.0%
92.6%
95.4%

0.0%
10.0%
20.0%
30.0%
40.0%
50.0%
60.0%
70.0%
80.0%
90.0%
100.0%
1. Multiple errors in documentation provided on cancellation reports:

Cancel Reason (Epic Menu of 37 choices) NOT matching Comment Field (free text area documented by ASC staff)

7/25/2012 Schedule Error [32]
7/26/2012 Not Medically Cleared [43]
7/31/2012 Equipment Not Available [40]
7/31/2012 Not Medically Cleared [43]
8/14/2012 Patient Request [42]
8/20/2012 Provider Request [44]
8/22/2012 Provider Request [44]
8/27/2012 Provider Request [44]
8/27/2012 Provider Request [44]
8/28/2012 Not Medically Cleared [43]
9/7/2012 Provider Request [44]
9/12/2012 Feeling Better/Worse [29]
9/24/2012 Not Medically Cleared [43]
9/25/2012 Feeling Better/Worse [29]
10/1/2012 Provider Request [44]
10/9/2012 Other [0]
10/17/2012 Other [0]
10/17/2012 Not Medically Cleared [43]
10/17/2012 Provider Request [44]

Per Dr. Carlisle via Raya Crum - pt. needs to see PCP to obtain cardiac clearance before proceeding with surgery.

Per Dr. Becker due to Epinephrine shortage
Per Cindy Orozco via email - pt. has poison ivy rash and will be R/S to 08/28/12
Per Stephanie Zamarripa - pt. feeling nervous. To be R/S to 09/12/12
Per Cindy Orozco, Dr. Fry has the flu and will need to reschedule for next Monday 08/27/12
Per Cindy Orozco, Dr. Fry has the flu and will need to reschedule for next Monday 08/27/12.
Per Dr. Chalfin - patient cancelled due to shortness of breath, chest pain, and abnormal labs.
Per patient on Plavix
Per Cindy Orozco - Dr. Fry ill. To be R/S to 09/07/12
Per Cindy Orozco - Dr. Fry ill. To be R/S at a later date
Per Stephanie Zamarripa - Patient is not medically cleared.
Per Cindy Orozco via Barbara Rios - Did not receive auth in time.
Per Cindy Orozco via email - to be R/S to 10/01/12
Per Stephanie Zamarripa via email.
Per Barbara Rios and Natalie Lajia - Unable to receive authorization from CFHP
Per Donna Tweedle via telephone - pt. needs cardiac clearance.
Per Donna Tweedle - Patient has upper respiratory issues.
Per Kathy Schwegmann the reimbursement from Carelink would be less than the cost of the case.
Per Cindy Orozco
Pt. unable to pay copay.
Per Barbara Rios and approved by Cindy Orozco via email - Pt. does not have copay.
Pt had flu-like symptoms and drank this am
Per notes in Epic, pt. no showed for pre-op in Ophthalmology
Per Donna Trejo - pt. not cleared by cardiologist
Per new booking sheet

7/26/2012 Not Medically Cleared [43]
7/31/2012 Provider Request [44]
7/31/2012 Feeling Better/Worse [29]
8/14/2012 Feeling Better/Worse [29]
8/10/2012 Feeling Better/Worse [29]
8/10/2012 Feeling Better/Worse [29]
8/12/2012 Provider Request [44]
8/12/2012 Provider Request [44]
8/12/2012 Provider Request [44]
8/14/2012 Feeling Better/Worse [29]
8/17/2012 Feeling Better/Worse [29]
8/17/2012 Feeling Better/Worse [29]
8/28/2012 Not Medically Cleared [43]
9/5/2012 CPC [46]
9/7/2012 Provider Request [44]
9/12/2012 CPC [46]
9/14/2012 CPC [46]
9/14/2012 Not Medically Cleared [43]
9/15/2012 Feeling Better/Worse [29]
10/1/2012 Provider Request [44]
10/9/2012 Other [0]
10/17/2012 Other [0]
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Per new booking sheet
2. Collection Range January 2012 – March 2013
66 Surgeries were scheduled (per month)
10.6% were cancelled ⇒ approx. 7 per month
3. Combined most common reasons were related to the patient and physician (62%)

4. Surgical Clearance and Financial Issues $\rightarrow$ ~20%

5. Scheduling, Transportation, and “Other” $\rightarrow$ ~20%
## Project Milestones

- **Team Created January 2013**
- **AIM Statement February 2013**
- **Background Data; Affinity Chart; Brainstorming February – March 2013**
- **Implementation #1 Education and Process change to not post cases +72 hours from date of surgery March 1, 2013**
- **Implementation #2 Create and Publish Outlook based Surgical Scheduling Calendar March 18 – 22, 2013**
- **Data Analysis March 23-29, 2013**
- **Implementation #3 Provider Surgical Order EMR Smart Phrase April 7, 2013**
- **Frustration!**
- **Implementation #4 ASC Staff Education of proper cancellation documentation in Epic. May 29, 2013**
Intervention

Educate

1. Provide monthly cancellation reports to physicians; provided by the ASC and Ophthalmology staff.
2. ASC staff to ensure documented cancellation reasons are accurate and consistent.

Optimize

1. Outlook Calendar – one schedule, accessible to all, at multiple locations. (Permissions vary per user.)
2. Patient Surgical Packet to include financial, transportation, medication, and scheduling information

Standardize

1. Physician based scheduling protocol; CPT’s, special instructions, pre-op labs, etc.
Implementation # 1

DO NOT POST CASES MORE THAN 72 HOURS FROM SCHEDULED SURGERY DATE
### Implementation # 2

#### Key Tasks:
- Verify Provider SX Dates
- Identify Available OR Time
- Confirm Case Order
- Access Scanned Data
  - Clinic Notes
  - Lab Results
  - Insurance Auth’s
  - Patient Contact Info
  - Measurements
  - Whatever You Need…

![Daily Task List](image_url)
.iisurgerydecision  

Implementation # 3  

EpicCare EMR smart phrase created for use when a provider determines surgery is needed. This is routed to the surgical schedulers to coordinate all pre-operative care.

This smart phrase not only eliminates the guesswork, but it is also the provider’s EMR documentation of the decision for surgery.
Implementation # 4

**Provider in Surgery** - if a case is cancelled because other cases are running late, that is not the patient's fault. If this reason is selected, the comment needs to indicate that “previous scheduled cases ran longer than expected.”

**Patient Request** - used when patient changes their mind, feels anxious, or nervous; even if patient isn't feeling well. Again, this is at the request of the patient. This is different than not being medically cleared. Maybe the patient states their tummy hurts, yet, medically they could still have surgery.

**Not Medically Cleared** - used when patient has checked in and is being prepped for surgery. Preop H&P reveals poor vitals that cause a risk/concern for the patient and provider. The OR team, and or surgeon, determine the patient is not medically cleared. Again, the comment selection must indicate specifics like, "Not cleared morning of surgery due to poor vitals." (As to not confuse a cancelled case where labs were received days in advance.)

Weather, transportation, etc... Are pretty self-explanatory.
Early Results

UT Medicine Ophthalmology Clinic
Surgery Cancellations

Surgery Cancellations Percent of Scheduled

Pre and Post Intervention

Jan-12  Feb-12  Mar-12  Apr-12  May-12  Jun-12  Jul-12  Aug-12  Sep-12  Oct-12  Nov-12  Dec-12  Jan-13  Feb-13  Mar-13  Apr-13  May-13

LCL  CL  UCL

0%  5%  10%  15%  20%  25%  30%
ROI Pre Intervention: Lost Revenue

- Median Surgical Cancellation rate for MARC Ophthalmology Jan 2012 to March 2013: **10.6%** (median 7 cancellation for 59 cases performed monthly)
- The lost revenue opportunity per cancelled cataract case is **$718 assuming:**
  - all scheduled cases are performed
  - 60/40 Medicare/Commercial payor mix for cataract surgery
  - Reimbursement: $630 (Medicare) and $850 (Commercial Insurances)

*Reimbursement numbers based on Cataract Surgery code*
Return on Investment

- **Lost revenue Jan 2010 to March 2013**
  - $5,024 per month ($718 per case x 7 cases)
  - $60,288 loss per year

- Average reimbursement per Provider on OR day (5 cases) **$3150.00 (Medicare) / $4250.00 (Commercial Ins.)**
  - Typical OR schedule is 60/40 split of MCR/Comm. Ins.

- Average reimbursement per Provider in a full clinic day (36 patients) **$5400.00**

- **Costs**
  - $400.00 / hour OR Utilization Fee per Provider
  - Additional ancillary staff costs

*Reimbursement numbers based on Cataract Surgery code*
Additional Indirect Costs

- *Downstream effects* of cancellation
  - Facilities to revoke Ophthalmology department’s surgical time due to cancellation rate
  - *Wasted time* (*equals wasted money*)
    - Surgical Coordinator: 45 min.
    - Benefit Coordinator: 30 min.
    - Rescheduling: 30 min.
    - Time in clinic 1-2 hours if provider must repeat preoperative visit
  - Clinic / Patient time and labor reordering labs, tests, other patient appointments
  - Frustration
  - Loss of revenue for ASC
ROI Post Intervention Example: Cataract case

- A 50% reduction in surgical cancellation rate (our aim):
  - cancellation rate of 10.6% → 5.3%
  - 7 cancellations → 3.5 cancellations (per month)
  - Correlates to **3.5 MORE CASES** that were previously cancelled (per month)
  - Additional revenue of $2513 per month ($718 per case x 3.5 ‘extra’ cases) and

$30,156 per year

- Continued decrease in cancellation rates will result in increased revenue for the clinic, internal and external customer satisfaction, exemplary care for the patient, and improved morale of the department’s staff and providers.
Looking ahead…

- There will **ALWAYS** be a measurable surgical cancellation rate
- Continue to monitor this rate within the Ophthalmology department
- Continue to provide feedback to providers and staff
- Determine additional interventions and educational opportunities as the MARC ASC/UHS transition is finalized
- Promote the interventions to other UT Medicine clinics
- Aim to look at MARC ASC and use data as a catalyst for other surgical sites
THANK YOU!