

Preventing Surgical Confusions in Ophthalmology

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Surgical Confusions

- Wrong patient
- Wrong site
- Wrong procedure
- (Wrong implant)

Incidence Unknown

Rarely reported except in lay press

PIAA: 1000 liability claims on file

VA: $1/25,000 = 1/\text{month}$ in US

Hand surgeons: 16% nearly, 21% did

JCAHO: 58% ambulatory

Site 76%, Pt/procedure 24%

Risk Factors

- Breakdown in communication
- Inadequate verification of pt or procedure
- Staffing, distraction, language
- Emergent, multiple sx, pt characteristics
- Busier, more experienced surgeons

Why Ophthalmology?

Orthopedics, urology, neurosurgery

- Incidence in ophthalmology unknown

Potentially devastating

- Contributing factors ?
- Consequences to pts, ophthalmologists?
- Effectiveness of Universal Protocol?

Hypothesis

- Confusions occur rarely
- Unacceptable: public, legal, regulatory
- Often predictable risk
- Wrong IOL > eye, pt/procedure
- Preventable w/ Universal Protocol

Methods

42 closed cases (40%)

OMIC, 1982-2003

64 NYPORTS (60%)

NYSDOH, 2000-2005

Masked pts, institutions, surgeons

Methods, cont'd

- What error, how occurred?
- Who recognized, when?
- When occurred, who responsible?
- Was pt/family informed?
- What treatment, severity?
- Was it preventable w/ UP?
- What liability, sanctions?

67 (63%) Wrong Lens Implant

17 errors preoperative

A-scan not programmed

Transcription errors in office

Unlikely preventable with UP

46 errors intra-operative

Failure to check lens spec's

Labels, training, storage

R/L, powers, schedules

Workload, distraction

15 (14%) Wrong Eye

Inadequate site verification

Drape covered mark, tape moved

- 5 lacrimal drainage surgeries
- 3 cataract procedures: 2 halted
- 2 YAG capsulotomies
- 1 retinal detachment: halted
- 1 lid procedure: halted
- 1 corneal transplant

14 (13%) Wrong Eye Blocks

Inadequate site verification

- Site marking, time-out not done
- Purple mark on pigmented skin
- Some errors made in office

Patient confusion, complicity

8 (8%) Wrong Patient/Procedure

Inadequate patient identification

- Clinic laser procedures
- Two similar names

Exotropia repair for pt w/ esotropia

2 (2%) Wrong Transplant

Corneal transplants

- Incorrect tissue in refrigerator
- Inadequate verification

Who and When Recognized

Surgeon 66 (65%)

- OR staff 19
- Patient 4 (wrong eye/block)

At facility 80 (75%)

- In OR 23

Recovery period 23 (22%)

Statistical Analysis

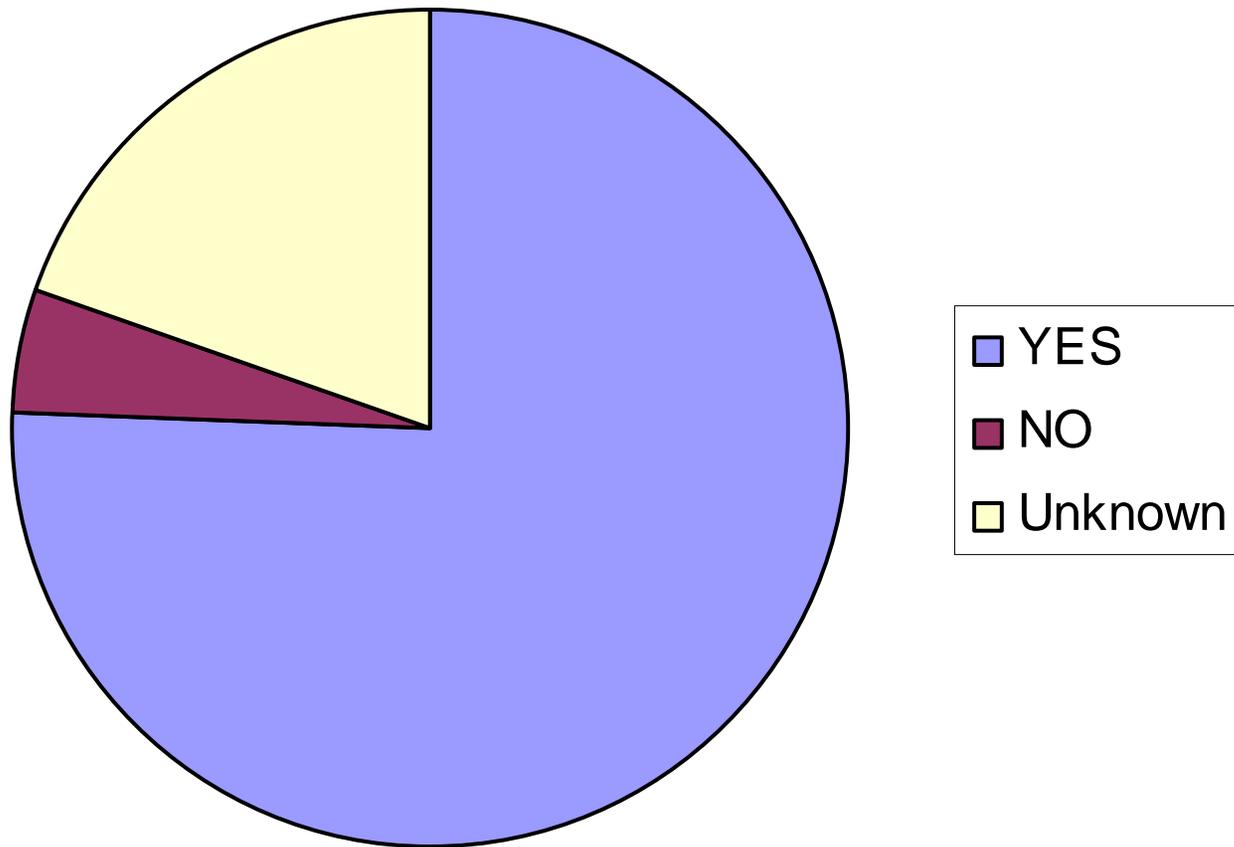
Wrong eye/pt/procedure

- 64% surgeon alone responsible
- 97% preventable

Wrong implant/transplant

- 81% others partly responsible ($p=.001$)
- 77% errors preventable ($p=.009$)
- Injuries more severe ($p=.001$)

Was Pt/family Informed?



Injury Scores

1: Temporary/insignificant

- Scar only

2: Temporary/minor

- Delayed recovery, return to OR
- < 3 D over- /under-correction

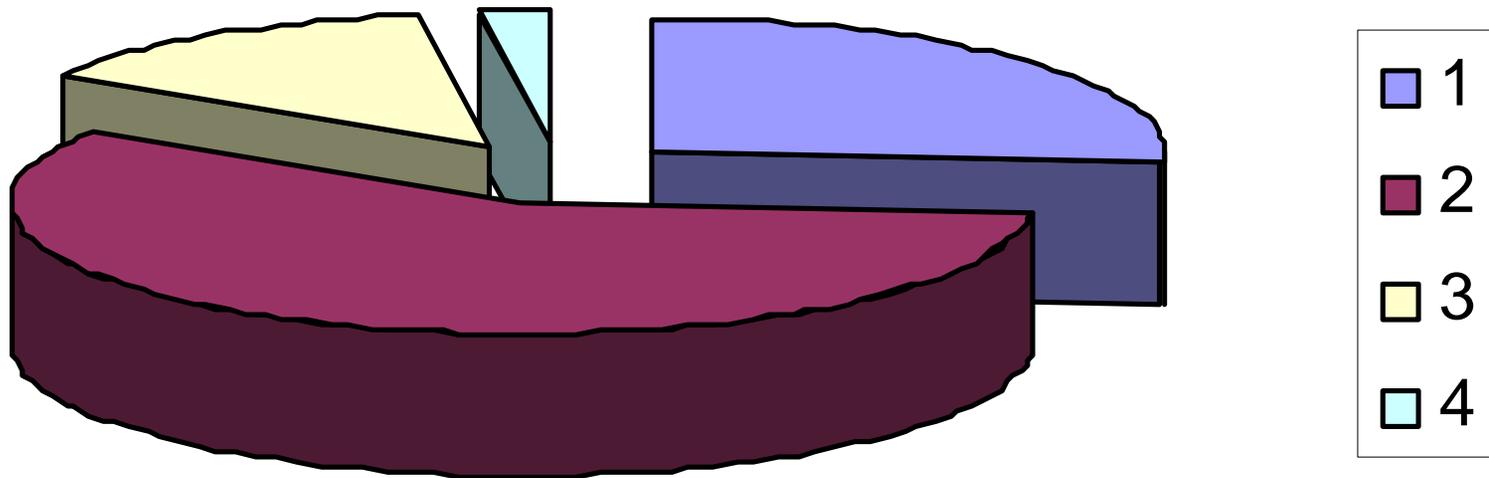
3: Mild/permanent

- Longer delay, > 3 D

4: Severe permanent injury

- Permanent loss of vision

Severity of Injury Score



Policy Changes and Sanctions

Policies strengthened: 56/64

Practice monitored: 5/64

Temporary suspension: 1/64

Incidence in Ophthalmology

62 cases/900,000 eye surgeries

- $6.9/100,000 = 69$ sigma
- Manufacturing standard = 6 sigma
- Under-reporting?

Liability

42 / 2256 closed cases

- 1.86% of liability concerns
- Payment in 48% vs. 21% overall
- Suits basically indefensible

Ophthalmology Like Other Specialties

Switched schedules, personnel

Communication

Pre-op verification, site marking, time out

- Must take seriously
- Checklist: simplifies
- Watch drape, color, tape

Ophthalmology vs. Other Specialties

Wrong site, pt/procedure rare

Wrong implant common: 64%

- 70% of wrong equipment cases
- IOLs look alike and pts can't help

16/106 cases likely unpreventable w/ UP

- Need vigilance throughout process
- Need special care with implants

Most Errors Mild, Treatable

- Wrong implants replaced
 - Corneal surgery, piggyback options
- Wrong blocks dissipated
- Laser refractive surgery re-treatable
- Glaucoma, lacrimal procedures harmless
- Strabismus surgery re-done

Average indemnity \$30 K vs. \$91 K overall

14 Cases Severe (3 or 4)

- New glaucoma, corneal decompensation
- Corneal transplantation only good eye
- Severe refractive error one or both eyes
- Annoying diplopia, asthenopia common

Procedures Deserve Support

Sanctions

Liability

Embarrassment

Conscience

Reputation: individual
profession

Enlightened Approach

If error: treat patient

Prompt, full, honest disclosure

- Acknowledge harm
- Take responsibility
- Explain what happened
- Show remorse
- Make amends: won't recur

Enlightened Approach, cont'd

“Blame, Shame, Train”

- Encourages culture of secrecy
- Inhibits effective RCA, improvement

Caregiver as the “second victim”

- Humans make mistakes
- Crew resource management

Improving Patient Safety

- Oversight organizations
- Professional groups
- Group purchasers
- Standards for information
- Safety systems at delivery level
- Culture of safety