

# NHSN Outpatient Dialysis Reporting: The View From 35,000 Feet

## Background

- Statistics from NIDDK (2005)<sup>1</sup>:
  - Over 485,000 cases of end-stage renal disease (ESRD) in the US
    - About 37% resulting from diabetes
  - About 107,000 new cases of ESRD in 2005
    - About 44% resulting from diabetes
  - Estimated costs: \$32 billion (2005 dollars)
    - About \$66,000 per patient per year
    - About 90% of cases covered by Medicare
  - About 312,000 ESRD patients received hemodialysis services
- Oregon has 54 outpatient dialysis centers
  - Most are affiliated with major outpatient dialysis networks

## NHSN Dialysis Incident

- Part of the Device-Associated Module
  - Must report for a minimum of six months
- Specific events (numerator data):
  - Hospitalization
  - IV antimicrobial start
    - Was IV vancomycin started?
  - Positive blood culture
    - Pathogens/susceptibility are specified similar to CLABSI reporting
- Denominator data
  - The number of chronic hemodialysis patients who received hemodialysis services on the first two working days of the month
- Risk stratifier: type of vascular access
  - Graft
  - Fistula
  - Temporary central line
  - Permanent central line
  - Port access device

## NHSN's 2006 Dialysis Surveillance Report<sup>2</sup>

Specific Event	Fistula	Graft	Permanent central line	Temporary central line
Hospitalization*	7.7	9.2	15.7	34.7
Antibiotic start*	1.8	2.4	6.4	25.4
<i>Vancomycin</i> *	1.2	1.6	5.0	16.1
Bloodstream infection*	.5	.9	4.2	27.1

\* Mean rate per 100 patient-months

1: <http://kidney.niddk.nih.gov/kudiseases/pubs/kustats/index.htm>, accessed 10/10/2008.

2: Klevens RM, Edwards JR, Andrus ML, et al. *Seminars in Dialysis*. 2008; 21(1), 24-28.

## HAIs in ASCs

### Mandatory Surgical Site Infection Reporting in Missouri

- Closely replicates NHSN definitions and protocol, but data are reported to the State rather than to CDC
- Only breast surgery (BRST) and hernia repair (HER) are reported for ASCs
- Nearly all ASCs reported zero infections
  - Several ASCs reported one infection
  - One ASC reported two infections

### Summaries of Literature Abstracts

J Urol. 2008 Aug;180(2):588-92; discussion 592. Epub 2008 Jun 12.

- Outbreak of cystoscopy-related urinary tract infections in a urology clinic

Urology. 2007 May;69(5):912-4.

- Outbreak of Pseudomonas aeruginosa infections after outpatient prostate biopsy

Surg Infect (Larchmt). 2006;7 Suppl 2:S121-3.

- Surgical site infection rate after inguinal hernia repair was 65 per 10,000 in one ASC

Am J Infect Control. 2005 Feb;33(1):6-10.

- Surgical site infection rate after inguinal hernia repair was 150 per 10,000 in one free-standing ASC

MMWR Morb Mortal Wkly Rep. 2004 Mar 12;53(9):192-4.

- Outbreak of surgical site infections in patients receiving face lifts

Am J Infect Control. 2005 Feb;33(1):11-4.

- Similar surgical site infection rates in free-standing (9 per 10,000 arthroscopic knee procedures; 65 per 10,000 inguinal hernia repair procedures) and hospital based surgery centers (11 per 10,000 arthroscopic knee procedures; 78 per 10,000 inguinal hernia repair procedures)

Clin Infect Dis. 2005 Jul 15;41(2):195-200. Epub 2005 Jun 7.

- Outbreak of surgical site infections after anterior cruciate ligament reconstructive surgery in one ASC

Plast Reconstr Surg. 2005 Aug;116(2):529-31.

- Observed 0 HAI cases in 1810 procedures
- Authors concluded that there is no need for skin antisepsis prior to elective outpatient plastic surgery

## HAIs in NICUs

### NHSN Findings

From the NHSN Update on Antimicrobial Resistance, 2006-2007:

- NICUs represent 12.2% of reporting locations
- NICUs represent 20.5% of reported CLABSIs
- Other tabulated data do not provide results for NICUs

From the 2006 NHSN report:

- CLABSI rate for <750 g. (6.4 per 1000 central line days) is higher than any other location except Burn ICUs (6.8 per 1000 central line days)
- CLABSI rate for > 2500 g. (3.1 per 1000 central line days) is similar to the CLABSI rate for medical ICUs (2.9 per 1000 central line days)

**Table 5.** Pooled means and key percentiles of the distribution of central line-associated BSI rates and central line utilization ratios for level III NICUs, DA module, 2006

Birth-weight category	No. of units	No. of CLAB	Central line-days	Pooled mean	Percentile				
					10%	25%	50% (median)	75%	90%
<b>Central line-associated BSI rate*</b>									
≤750 g	42	118	18,458	6.4	0.0	2.5	5.2	11.0	15.6
751-1000 g	44	83	18,781	4.4	0.0	0.0	3.8	8.7	10.2
1001-1500 g	42	87	17,968	4.8	0.0	0.0	3.6	7.5	14.0
1501-2500 g	36	68	16,208	4.2	0.0	0.0	0.0	4.1	8.5
>2500 g	32	50	16,131	3.1	0.0	0.0	0.0	1.9	5.3

### Summaries of Literature Abstracts

Am J Infect Control. 2005 Jun;33(5):268-75.

- Review
- Highest NICU HAI rates reported in facilities treating the largest proportion of neonates with birth weights less than 1000 grams

Infect Control Hosp Epidemiol. 2006 Jun;27(6):581-5. Epub 2006 May 25.

- MRSA outbreak caused by a NICU healthcare worker who was colonized

J Perinatol. 2006 Mar;26(3):176-9.

- Evaluated effectiveness of a NICU infection control program
- Included implementing a nursing team for central venous catheter care
- Reduction in HAIs sustained for three years post-intervention

Am J Infect Control. 2008 Aug;36(6):430-5.

- Evaluated a hand hygiene intervention in an Italian NICU
- Substantially reduced central venous catheter colonization
- Estimated to prevent ten infections per year

## **A Second Look at the Vermont Oxford Network**

### **VLBW Database**

#### Eligibility

- Birth weight 401-1500 grams
- Gestational age 22 weeks 0 days to 29 weeks 6 days
- Follow up until discharged home, age one year, or expired
- Submit data electronically or submit paper forms

### **Expanded Database**

#### Eligibility

- All infants eligible for VLBW Database
- Birth weight over 1500 grams and admitted to NICU by age 28 days
- Birth weight over 1500 grams and expires by age 28 days without ever discharging home
- Follow up until discharged home, age one year, or expired
- Submit data electronically

### **Requirements**

- Membership application
- Membership agreement
- Fee (\$4000 for 2008)

### **Reports**

- Quarterly reports
- Annual NICU quality management report
- Annual network database summary for public distribution
- Access to web-based reporting system to produce customized tabular and graphical output

### **Considerations**

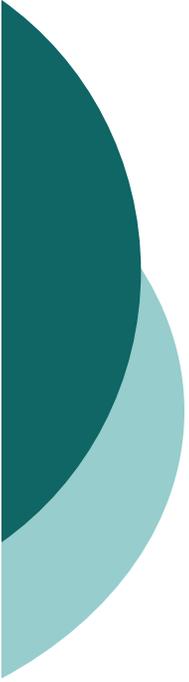
- No new reporting burdens
- Membership fee is not trivial
- Very limited potential for HAI reporting
  - Item 35: Sepsis and/or meningitis late (after age 3 days), prior to discharge or transfer
    - Item 35a: cultured bacterial pathogen is listed in an appendix (yes/no/not applicable)
    - Item 35b: cultured pathogen is coagulase negative staph AND infant has symptoms of infection AND infant is treated with IV antibiotics (yes/no/not applicable)
    - Item 35c: cultured fungal pathogen (yes/no/not applicable)



# OREGON ASC INFECTION CONTROL PRACTICES & STATISTICS

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**DATA COLLECTED FROM A SAMPLE OF 6 OREGON ASC'S**

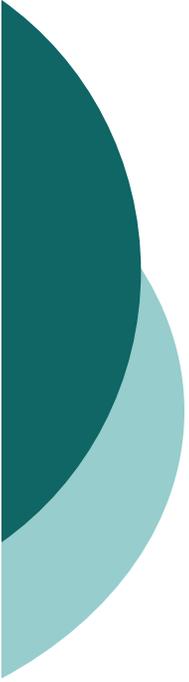


## OREGON ASC DEMOGRAPHICS

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- **78 Surgery Centers Currently Followed by OASCA**

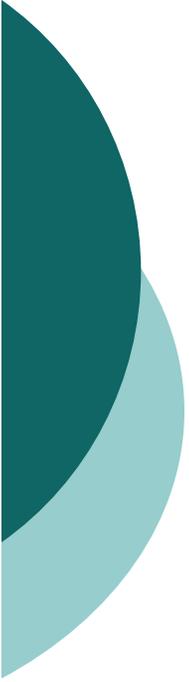
<b>1. Pain Management Centers:</b>	<b>5</b>
<b>2. GI:</b>	<b>10</b>
<b>3. Ophthalmology:</b>	<b>14</b>
<b>4. Multispecialty:</b>	<b>20</b>
<b>5. Plastics</b>	<b>10</b>
<b>6. Urology</b>	<b>1</b>
<b>7. Oral/Maxillofacial:</b>	<b>1</b>
<b>8. Reproductive Health:</b>	<b>1</b>
<b>9. Neuro:</b>	<b>4</b>
<b>10. Dermatology:</b>	<b>1</b>
<b>11. Gynecology:</b>	<b>1</b>
<b>12. Orthopedic:</b>	<b>1</b>
<b>13. Unknown:</b>	<b>9</b>



## DESCRIPTION OF SAMPLE SURGERY CENTERS

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- **ASC #1**                      **Ear/Nose/Throat/Multispecialty**
- **ASC #2**                      **Multispecialty**
- **ASC #3**                      **Multispecialty**
- **ASC #4**                      **Multispecialty**
- **ASC #5**                      **Gastroenterology**
- **ASC #6**                      **Multispecialty**



## TOP 5 PROCEDURES FOR EACH ASC

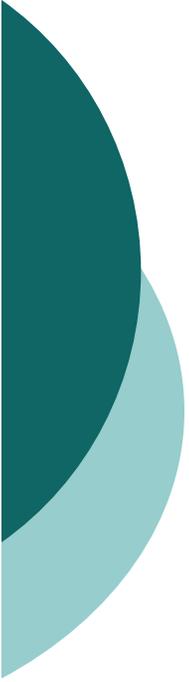
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- **ASC #1**

- Tonsillectomy & Adenoidectomy**
- Bilateral Myringotomy with Tubes**
- Septoplasty with Turbinectomy**
- Multisinus Surgery**
- Adenoidectomy**

- **ASC #2**

- Breast Augmentation**
- Abdominoplasty**
- Pediatric Dental**
- GYN Laparoscopy & Hysteroscopy**
- Breast Biopsy**



## TOP 5 PROCEDURES CONT'D

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- **ASC #3**

- Pain Management Injections**

- Knee Arthroscopy**

- Anterior Cruciate Ligament Repair**

- Arthroscopic Shoulder SLAP Repair**

- Rotator Cuff Repair**

- Arthroscopic Shoulder Decompression**

- **ASC #4**

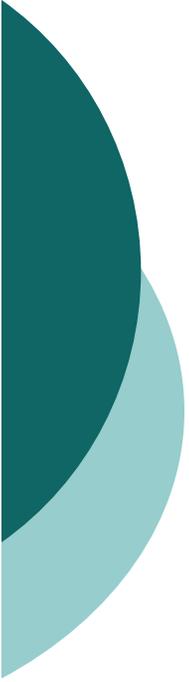
- Transforaminal Lumbar Epidural Injection**

- Colonoscopy**

- Cataract Extraction**

- Lumbar (Caudal) Epidural Steroid Injection**

- Carpal Tunnel Release**



## TOP 5 PROCEDURES CONT'D

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- **ASC #5**

**Colonscopy**

**EGD**

**Flexible Sigmoidoscopy**

- **ASC #6**

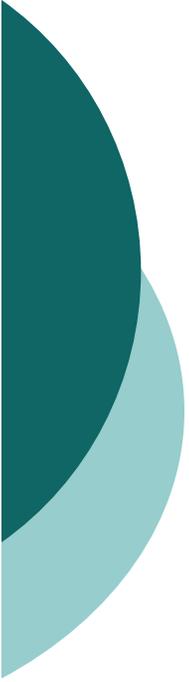
**Knee Arthroscopy with Meniscectomy**

**Epidural Steroid Injections**

**Endoscopic Carpal Tunnel Release**

**Shoulder Arthroscopy with Decompression**

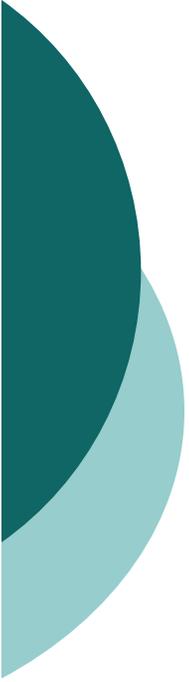
**Anterior Cruciate Ligament Repair**



## WHO IS IN CHARGE OF INFECTION CONTROL IN YOUR FACILITY

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- **ASC #1**                      **Staff RN from Operating Room**
- **ASC #2**                      **Administrator – RN**
- **ASC #3**                      **Executive Director – RN**
- **ASC #4**                      **Administrator – RN**
- **ASC #5**                      **Certified Infection Control Nurse**
- **ASC #6**                      **Administrator - RN**



## METHODS USED TO GATHER POSTOPERATIVE INFECTION DATA

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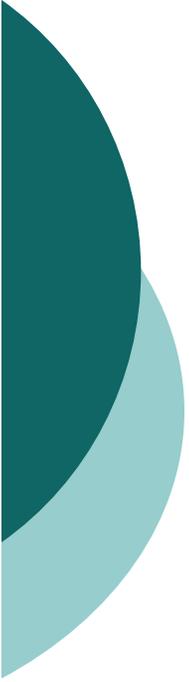
- **All six surgery centers monitor their postoperative infections in a similar manner:**
  1. **Surgeon reports postoperative infections via a monthly survey .**
  2. **Once a postoperative infection is identified, a root cause analysis/investigation is performed. A research tool/worksheet is used for this. See examples.**



## WHO DO YOU REPORT THE POSTOPERATIVE INFECTIONS TO?

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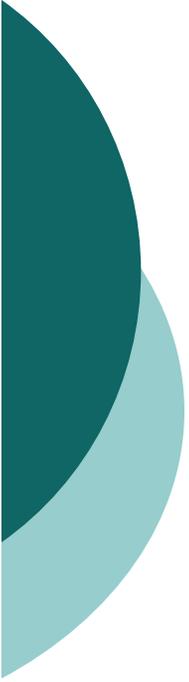
- **All six centers report their infection control results to the following:**
  - 1. Quality Assurance Committee**
  - 2. Medical Executive Committee**
  - 3. Board of Directors**
  
- **Three of the six centers benchmark their postoperative infections with corporate or national benchmarks**
  
- **Five of the six centers report to the Patient Safety Commission**



## INFECTION RATES

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	<u>2006</u>	<u>2007</u>
○ ASC #1	0.3% (6/1825)	0.3% (5/1821)
○ ASC #2	0.4% (9/2254)	0.2% (3/1957)
○ ASC #3	0.3% (8/2630)	0.2% (10/3537)
○ ASC #4	0.3% (10/3130)	0.4% (18/4036)
○ ASC #5	Don't currently keep track	
○ ASC #6	0.3% (5/1599)	0.13% (3/2194)



## ASC National Outcomes Monitoring Project Report Results 4<sup>th</sup> Quarter 2007

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		<u>MEAN</u>
○ <b>Orthopedics:</b>	<b>2.34/1000</b>	<b>0.23%</b>
○ <b>Multi-specialty:</b>	<b>1.12/1000</b>	<b>0.11%</b>
○ <b>Gastroenterology:</b>	<b>0.08/1000</b>	<b>0.008%</b>
○ <b>Ophthalmology:</b>	<b>0.07/1000</b>	<b>0.007%</b>

**MULTI-SPECIALTY ASCS**

	Mean	10th	25th	Median	75th	90th	Min	Max	Responses
<b>Clinical Outcomes</b>									
Unexpected Complications Per 1,000	2.72	0.00	0.00	1.23	3.11	8.54	0.00	35.09	223
Post-surgical Infections Per 1,000	1.12	0.00	0.00	0.52	1.60	3.03	0.00	18.23	229
Unscheduled Direct Transfers Per 1,000	1.27	0.00	0.00	0.81	1.90	3.24	0.00	10.47	235
Patient Deaths Per 1,000	0.03	0.00	0.00	0.00	0.00	0.00	0.00	1.66	227
Return to Surgery Per 1,000	0.29	0.00	0.00	0.00	0.00	1.01	0.00	6.35	219
Patient Burns Per 1,000	0.03	0.00	0.00	0.00	0.00	0.00	0.00	1.74	226
Medical Device Failures Per 1,000	0.19	0.00	0.00	0.00	0.00	0.00	0.00	14.71	224
Retained Foreign Object Per 1,000	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.73	228
Patient Fall Per 1,000	0.16	0.00	0.00	0.00	0.00	0.70	0.00	2.30	226
Wrong Site, Side, Procedure, Implant, Patient Per 1,000	0.02	0.00	0.00	0.00	0.00	0.00	0.00	1.26	227
Prophylactic IV Antibiotics On-time (%)	93.19	71.00	96.00	100.00	100.00	100.00	1.00	100.00	79
<b>Business Operations</b>									
Paid Clinical, Non-physician Hours	9.71	5.11	6.71	8.66	11.14	13.80	2.02	62.73	187
Clinical Staff Turnover Rate (%)	3.58	0.00	0.00	0.00	5.00	10.00	0.00	44.00	219
Non-clinical Staff Turnover Rate (%)	5.23	0.00	0.00	0.00	2.50	20.00	0.00	100.00	221
Days A/R Outstanding	49.63	25.91	33.77	42.92	56.53	76.34	20.54	207.26	153
Claims Denial Rate (%)	4.43	0.00	0.16	1.63	5.00	11.44	0.00	79.58	126
Total Net Charge	\$1,788	\$763	\$998	\$1,349	\$2,084	\$3,242	\$140	\$8,933	187
<b>Clinical Operations</b>									
On-time Rate (%)	72.93	29.00	58.00	80.00	95.00	98.50	1.00	100.00	187
OR Time Per Encounter	54.48	33.00	41.50	50.00	64.00	84.00	5.00	157.00	209
Procedure Room Time Per Encounter	29.17	13.50	19.00	25.00	35.00	49.50	3.00	105.00	146
OR Time Use Rate (%)	45.83	20.00	30.00	44.00	62.50	77.00	1.00	118.00	206
Procedure Room Time Use Rate (%)	33.54	5.00	12.00	27.00	51.00	73.00	0.00	100.00	147
<i>Cancellation Rates</i>									
After Admission, Before Anesthesia – Medical Condition (%)	0.89	0.00	0.11	0.32	0.68	1.13	0.00	41.83	227
After Admission, Before Anesthesia – Physician Responsibility (%)	0.25	0.00	0.00	0.00	0.11	0.42	0.00	15.61	202
After Admission, Before Anesthesia – Patient Responsibility (%)	0.67	0.00	0.00	0.12	0.37	0.85	0.00	23.15	213
After Anesthesia Induction (%)	0.03	0.00	0.00	0.00	0.00	0.09	0.00	1.52	229
Prompt Contact Rate (%)	78.74	25.50	72.00	94.00	100.00	100.00	0.00	100.00	191
Operative Report Transmission Rate (%)	67.88	0.00	40.50	89.00	98.50	100.00	0.00	100.00	173
Operative Report Filing Rate (%)	65.84	0.00	24.00	89.50	98.00	100.00	0.00	100.00	166
Medical Record Completion Rate (%)	85.71	50.00	89.50	98.50	100.00	100.00	0.00	100.00	186
Complaint Rate Per 1,000	1.11	0.00	0.00	0.00	1.10	2.90	0.00	22.80	220
Prompt Complaint Response Rate (%)	77.29	0.00	50.00	100.00	100.00	100.00	0.00	100.00	93
	<b>Yes</b>	<b>No</b>							
Program for Addressing Complaints	97.8%	2.2%							

**SINGLE-SPECIALTY ASCS: GASTROENTEROLOGY**

	Mean	10th	25th	Median	75th	90th	Min	Max	Responses
<b>Clinical Outcomes</b>									
Unexpected Complications Per 1,000	1.71	0.00	0.00	0.00	2.27	5.94	0.00	12.69	37
Post-surgical Infections Per 1,000	0.08	0.00	0.00	0.00	0.00	0.00	0.00	1.63	36
Unscheduled Direct Transfers Per 1,000	0.54	0.00	0.00	0.00	0.75	2.72	0.00	3.40	38
Patient Deaths Per 1,000	0.07	0.00	0.00	0.00	0.00	0.00	0.00	2.35	36
Return to Surgery Per 1,000	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.97	33
Patient Burns Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	37
Medical Device Failures Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36
Retained Foreign Object Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27
Patient Fall Per 1,000	0.09	0.00	0.00	0.00	0.00	0.51	0.00	0.97	38
Wrong Site, Side, Procedure, Implant, Patient Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	36
Prophylactic IV Antibiotics On-time (%)	99.69	98.00	100.00	100.00	100.00	100.00	96.00	100.00	13
<b>Business Operations</b>									
Paid Clinical, Non-physician Hours	3.99	2.56	3.19	3.51	4.58	6.54	2.01	7.31	31
Clinical Staff Turnover Rate (%)	4.00	0.00	0.00	0.00	6.50	19.50	0.00	33.00	37
Non-clinical Staff Turnover Rate (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	31
Days A/R Outstanding	45.79	24.36	29.92	39.12	47.56	80.32	21.25	122.47	31
Claims Denial Rate (%)	4.12	0.00	0.31	3.22	6.23	13.43	0.00	15.06	16
Total Net Charge	\$927	\$467	\$524	\$622	\$831	\$2,445	\$155	\$3,542	25
<b>Clinical Operations</b>									
On-time Rate (%)	68.00	22.50	44.00	70.00	99.00	100.00	21.00	100.00	15
OR Time Per Encounter	*	*	*	*	*	*	*	*	*
Procedure Room Time Per Encounter	33.38	18.50	27.00	32.50	39.50	53.50	17.00	62.00	16
OR Time Use Rate (%)	*	*	*	*	*	*	*	*	*
Procedure Room Time Use Rate (%)	59.13	12.50	45.00	66.50	79.00	86.00	11.00	87.00	16
<i>Cancellation Rates</i>									
After Admission, Before Anesthesia – Medical Condition (%)	0.13	0.00	0.00	0.06	0.20	0.42	0.00	0.77	21
After Admission, Before Anesthesia – Physician Responsibility (%)	0.04	0.00	0.00	0.00	0.03	0.29	0.00	0.42	18
After Admission, Before Anesthesia – Patient Responsibility (%)	0.11	0.00	0.00	0.00	0.15	0.55	0.00	0.60	17
After Anesthesia Induction (%)	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.07	24
Prompt Contact Rate (%)	87.22	42.50	88.50	98.00	100.00	100.00	20.00	100.00	32
Operative Report Transmission Rate (%)	88.00	8.00	97.50	100.00	100.00	100.00	0.00	100.00	37
Operative Report Filing Rate (%)	83.11	8.00	98.00	100.00	100.00	100.00	0.00	100.00	37
Medical Record Completion Rate (%)	97.19	97.50	100.00	100.00	100.00	100.00	8.00	100.00	36
Complaint Rate Per 1,000	0.79	0.00	0.00	0.00	0.17	2.42	0.00	16.54	36
Prompt Complaint Response Rate (%)	*	*	*	*	*	*	*	*	*
	<b>Yes</b>	<b>No</b>							
Program for Addressing Complaints	99.8%	0.2%							

\* Insufficient Data to Report Results.

SINGLE-SPECIALTY ASCS: OPHTHALMOLOGY

	Mean	10th	25th	Median	75th	90th	Min	Max	Responses
<b>Clinical Outcomes</b>									
Unexpected Complications Per 1,000	1.44	0.00	0.00	0.00	0.50	5.34	0.00	18.99	57
Post-surgical Infections Per 1,000	0.07	0.00	0.00	0.00	0.00	0.00	0.00	1.33	57
Unscheduled Direct Transfers Per 1,000	0.27	0.00	0.00	0.00	0.00	0.97	0.00	5.81	59
Patient Deaths Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56
Return to Surgery Per 1,000	0.11	0.00	0.00	0.00	0.00	0.00	0.00	3.47	53
Patient Burns Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	57
Medical Device Failures Per 1,000	0.24	0.00	0.00	0.00	0.00	0.00	0.00	6.90	57
Retained Foreign Object Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	56
Patient Fall Per 1,000	0.07	0.00	0.00	0.00	0.00	0.00	0.00	1.69	56
Wrong Site, Side, Procedure, Implant, Patient Per 1,000	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.98	57
Prophylactic IV Antibiotics On-time (%)	*	*	*	*	*	*	*	*	*
<b>Business Operations</b>									
Paid Clinical, Non-physician Hours	8.28	3.26	4.81	6.02	8.56	14.87	2.36	45.21	45
Clinical Staff Turnover Rate (%)	6.00	0.00	0.00	0.00	0.00	38.00	0.00	50.00	56
Non-clinical Staff Turnover Rate (%)	6.15	0.00	0.00	0.00	0.00	0.00	0.00	100.00	55
Days A/R Outstanding	52.95	20.67	31.67	36.95	51.01	134.38	20.07	164.92	35
Claims Denial Rate (%)	9.07	0.00	0.00	1.52	3.80	42.20	0.00	100.00	24
Total Net Charge	\$1,363	\$805	\$956	\$1,102	\$1,377	\$2,197	\$307	\$4,637	44
<b>Clinical Operations</b>									
On-time Rate (%)	73.72	32.50	54.00	84.00	96.00	98.50	0.00	100.00	43
OR Time Per Encounter	33.74	15.00	21.00	29.50	41.00	49.00	3.00	155.00	50
Procedure Room Time Per Encounter	25.24	8.00	14.50	19.00	30.00	59.00	5.00	113.00	29
OR Time Use Rate (%)	56.93	16.50	33.00	63.50	81.00	95.00	5.00	100.00	46
Procedure Room Time Use Rate (%)	30.14	3.00	4.00	10.00	49.50	100.00	1.00	100.00	29
<b>Cancellation Rates</b>									
After Admission, Before Anesthesia – Medical Condition (%)	0.30	0.00	0.00	0.11	0.35	1.05	0.00	3.05	57
After Admission, Before Anesthesia – Physician Responsibility (%)	0.05	0.00	0.00	0.00	0.00	0.18	0.00	0.64	51
After Admission, Before Anesthesia – Patient Responsibility (%)	0.21	0.00	0.00	0.00	0.32	0.70	0.00	1.93	53
After Anesthesia Induction (%)	0.04	0.00	0.00	0.00	0.00	0.09	0.00	0.64	59
Prompt Contact Rate (%)	70.47	8.00	61.00	82.00	96.00	100.00	0.00	100.00	51
Operative Report Transmission Rate (%)	64.92	0.00	13.50	80.00	97.50	100.00	0.00	100.00	50
Operative Report Filing Rate (%)	64.78	0.00	13.00	82.00	100.00	100.00	0.00	100.00	51
Medical Record Completion Rate (%)	77.46	10.00	71.00	99.00	100.00	100.00	0.00	100.00	50
Complaint Rate Per 1,000	1.68	0.00	0.00	0.00	0.30	4.07	0.00	29.75	54
Prompt Complaint Response Rate (%)	94.23	62.50	100.00	100.00	100.00	100.00	25.00	100.00	13
	<b>Yes</b>	<b>No</b>							
Program for Addressing Complaints	99.3%	0.7%							

\* Insufficient Data to Report Results.

**SINGLE-SPECIALTY ASCS: ORTHOPEDICS**

	Mean	10th	25th	Median	75th	90th	Min	Max	Responses
<b>Clinical Outcomes</b>									
Unexpected Complications Per 1,000	2.45	0.00	0.00	0.00	4.56	10.27	0.00	12.35	19
Post-surgical Infections Per 1,000	2.34	0.00	0.00	2.01	3.24	6.42	0.00	12.35	21
Unscheduled Direct Transfers Per 1,000	1.26	0.00	0.00	0.00	2.96	3.86	0.00	5.59	21
Patient Deaths Per 1,000	0.05	0.00	0.00	0.00	0.00	0.00	0.00	1.12	21
Return to Surgery Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
Patient Burns Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
Medical Device Failures Per 1,000	0.10	0.00	0.00	0.00	0.00	0.00	0.00	1.85	19
Retained Foreign Object Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	20
Patient Fall Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
Wrong Site, Side, Procedure, Implant, Patient Per 1,000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	21
Prophylactic IV Antibiotics On-time (%)	*	*	*	*	*	*	*	*	*
<b>Business Operations</b>									
Paid Clinical, Non-physician Hours	11.41	7.49	7.74	11.19	14.46	16.19	7.30	17.34	10
Clinical Staff Turnover Rate (%)	4.14	0.00	0.00	0.00	6.00	14.00	0.00	22.00	21
Non-clinical Staff Turnover Rate (%)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	19
Days A/R Outstanding	59.59	35.33	40.33	50.66	71.00	111.45	34.28	119.68	15
Claims Denial Rate (%)	13.26	0.00	0.43	3.13	12.71	57.50	0.00	100.00	12
Total Net Charge	\$2,594	\$1,100	\$1,418	\$1,966	\$3,367	\$5,561	\$1,045	\$5,652	15
<b>Clinical Operations</b>									
On-time Rate (%)	57.13	5.50	31.00	70.00	85.00	89.00	3.00	89.00	15
OR Time Per Encounter	74.00	43.50	53.00	65.00	81.00	137.50	41.00	138.00	15
Procedure Room Time Per Encounter	*	*	*	*	*	*	*	*	*
OR Time Use Rate (%)	50.33	19.00	38.00	47.00	65.00	76.50	3.00	80.00	15
Procedure Room Time Use Rate (%)	*	*	*	*	*	*	*	*	*
<b>Cancellation Rates</b>									
After Admission, Before Anesthesia – Medical Condition (%)	0.62	0.00	0.00	0.26	0.56	2.79	0.00	3.33	19
After Admission, Before Anesthesia – Physician Responsibility (%)	0.21	0.00	0.00	0.00	0.04	1.68	0.00	2.79	17
After Admission, Before Anesthesia – Patient Responsibility (%)	0.26	0.00	0.00	0.00	0.29	0.67	0.00	2.79	19
After Anesthesia Induction (%)	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.18	21
Prompt Contact Rate (%)	68.94	5.50	26.00	88.00	97.50	100.00	0.00	100.00	18
Operative Report Transmission Rate (%)	58.71	0.00	9.00	80.50	99.00	100.00	0.00	100.00	14
Operative Report Filing Rate (%)	57.53	0.00	11.00	94.00	98.00	100.00	0.00	100.00	15
Medical Record Completion Rate (%)	76.20	16.00	50.50	99.50	100.00	100.00	0.00	100.00	20
Complaint Rate Per 1,000	0.40	0.00	0.00	0.00	0.00	1.95	0.00	4.56	21
Prompt Complaint Response Rate (%)	*	*	*	*	*	*	*	*	*
<b>Program for Addressing Complaints</b>									
	Yes	No							
	99.8%	0.2%							

\* Insufficient Data to Report Results.

**CONFIDENTIAL**

**POST-OPERATIVE INFECTION REPORT (Cont'd) Page 2**

Wound Cultured:  Yes  No By:  Physician Office  Hospital  Other

Organism Identified: \_\_\_\_\_

Sterilization Records Applicable and Attached: \*Flash  Steris  Sterrad

Glutaraldehyde  Other: \_\_\_\_\_

\*Note: If more than one, give details: \_\_\_\_\_

Parameters for Time and Temperature Met?  Yes  No;

Comments: \_\_\_\_\_

Circulator(s): \_\_\_\_\_ Scrub(s): \_\_\_\_\_

(use personnel numbers - no names)

Procedure Length: \_\_\_\_\_ Prep Used: \_\_\_\_\_

Cultures Obtained at Center?  Yes  No If yes, note culture source and results: \_\_\_\_\_

**COMMENTS/ACTIONS/RECOMMENDATIONS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Note: Attach all follow-up hospital medical records/physician office notes.*

**REVIEW**

Infection Control Nurse: \_\_\_\_\_ Date \_\_\_\_\_

Facility Administrator Signature: \_\_\_\_\_ Date \_\_\_\_\_

Date Reviewed by Medical Advisory Committee: \_\_\_\_\_

# POST-OPERATIVE INFECTION REPORT

# CONFIDENTIAL

Patient # \_\_\_\_\_ Dr.# \_\_\_\_\_ Procedure: \_\_\_\_\_

Procedure room/location: \_\_\_\_\_

Discovered by:  Surgeon  Physician Office  Other \_\_\_\_\_

Date/Time Discovered: \_\_\_\_/\_\_\_\_/\_\_\_\_ at \_\_\_\_:\_\_\_\_ AM PM

Infection Control Officer Notified: Date \_\_\_\_/\_\_\_\_/\_\_\_\_ Time \_\_\_\_:\_\_\_\_ AM PM  
By:  Surgeon Call  Physician's Office  Patient  Post-Op Complication Report

### PATIENT

Risk Factors: \_\_\_\_\_

Age: \_\_\_\_\_

Social Factors: (Work, Living Environment): \_\_\_\_\_

Physical Condition/Diseases: \_\_\_\_\_

Return to Surgery: \_\_\_\_\_

Wound Classification:  Clean  Clean-Contaminated  Contaminated  Infected

Antibiotic prescribed by physician to take home:

Drug: Name \_\_\_\_\_ Dosage \_\_\_\_\_ Frequency \_\_\_\_\_ Quantity \_\_\_\_\_

Drain - Type: \_\_\_\_\_  Removed prior to discharge  In place at discharge

Dressing changed before discharge?  No  Yes By: \_\_\_\_\_

Date of Post-Op Telephone Call: \_\_\_\_\_  
Report of redness, swelling, fever, etc.  Yes  No

Describe: \_\_\_\_\_

Date(s) of patient post-op visits to physician office: \_\_\_\_/\_\_\_\_/\_\_\_\_

- Treatment of infection:
- Hospitalization Required
  - Treatment with medications only
  - Surgery Required
  - Patient treated by physician on outpatient basis

**INFECTION REPORT**

**PATIENT ACCOUNT NUMBER:** \_\_\_\_\_ **DOS** \_\_\_\_\_

**SURGEON:** \_\_\_\_\_

**SURGICAL PROCEDURE:** \_\_\_\_\_

**DATE INFECTION REPORTED:** \_\_\_\_\_

**LOCATION OF INFECTION:** \_\_\_\_\_

**CULTURE TAKEN: YES** \_\_\_\_\_ **NO** \_\_\_\_\_

**RESULTS OF CULTURE:** \_\_\_\_\_

**ACTION TAKEN:** \_\_\_\_\_

**DATE INFECTION RESOLVED:** \_\_\_\_\_

**FOLLOW UP:**

**DATE OF CHART REVIEW:** \_\_\_\_\_

**DATE OF STERILIZATION RECORD REVIEW:** \_\_\_\_\_

**PRE-OP ANTIBIOTICS GIVEN: YES** \_\_\_\_\_ **NO** \_\_\_\_\_

**PATIENT RISK**

**FACTORS:** \_\_\_\_\_

\_\_\_\_\_

**ANALYSIS:**

**CHANGE IN PROCEDURES**

**NEEDED:** \_\_\_\_\_

\_\_\_\_\_

**Signature of Person Completing Form** \_\_\_\_\_ **Date** \_\_\_\_\_

**Director of Nursing** \_\_\_\_\_ **Date** \_\_\_\_\_

**Medical Director** \_\_\_\_\_ **Date** \_\_\_\_\_

**MONTHLY POST-OP  
INFECTION/COMPLICATION SURVEY TOOL**

Dear Dr. \_\_\_\_\_

During the month of \_\_\_\_\_, you performed the attached operative procedures on the patients listed below. Please report post-operative complications and infections by completing columns 4 and 5 and returning the form to us.

Thank you.

Patient's Name	Surgery Date	Procedure(s)	Infection/Complication	None

Signed \_\_\_\_\_ RN, ORS  
(Infection Control Nurse)

Signed \_\_\_\_\_ MD/DO  
(Attending Physician)

Date Returned: \_\_\_\_\_ Reviewed By: \_\_\_\_\_

**POST-OPERATIVE COMPLICATIONS**

- Return to OR
- Shock
- Arrest
- Death
- Septicemia
- Hemorrhage
- Hyperpyrexia
- Transfer to Hospital
- Dehiscence

## WOUND MONITORING WORKSHEET

1. Patient Name: \_\_\_\_\_ Age: \_\_\_\_\_ Date: \_\_\_\_\_

2. Name of Physician: \_\_\_\_\_ Assistants: \_\_\_\_\_

3. Date of Procedure(s): \_\_\_\_\_ Time \_\_\_\_\_ am/pm

Procedure Performed: \_\_\_\_\_  
\_\_\_\_\_

Classification :  Clean       Contaminated       Dirty

4. Postoperative day on which the infection was discovered? \_\_\_\_\_

5. Description of drainage:  Clear     Serosanguineous     Purulent     Other

Amount of drainage:  Small     Moderate     Large     Other \_\_\_\_\_

Signs and Symptoms of infection:  Reddened area     Heat     Swelling

Pain (incisional)     Stitch Redness       Wound Dehiscence

Fever       Suppuration of Wound

6. Were cultures made and, if so, what were the organisms reported?  yes  No

Organism(s): \_\_\_\_\_  
\_\_\_\_\_

7. Were antibiotics used preoperatively or post-operatively, or both?

Pre-operatively       Post-operatively       Other

Date \_\_\_\_\_ Signature \_\_\_\_\_

cc: Administrative Director

cc: Medical Director

cc: QI Coordinator

Researcher's Name: \_\_\_\_\_ Date: \_\_\_\_\_

### INFECTION RESEARCH TOOL

Name of Patient \_\_\_\_\_ # \_\_\_\_\_ Date of Surgery \_\_\_\_\_

Type of Anesthesia:  Topical  Local  MAC  
 Regional  IV sedation  General

Procedure(s) performed \_\_\_\_\_ OS, OD

Time of Surgery \_\_\_\_\_ Length of Procedure \_\_\_\_\_

ASA Classification \_\_\_\_\_ Wound Classification \_\_\_\_\_

Name of Surgeon \_\_\_\_\_ Assistant \_\_\_\_\_

Anesthesia Staff \_\_\_\_\_

Name of Scrub Nurse(s) \_\_\_\_\_

Circulator(s) \_\_\_\_\_ RN

Name(s) of Guest(s) in Room \_\_\_\_\_

Pre-Op Medication(s) Used \_\_\_\_\_ Exp. Date \_\_\_\_\_

Prophylactic antibiotics \_\_\_\_\_ dose \_\_\_\_\_  
\_\_\_\_\_ dose \_\_\_\_\_

Were any open wounds or sores observed on the patient's skin before surgery?

YES  NO LOCATION \_\_\_\_\_

What was patient's pre-operative health status? \_\_\_\_\_

Were there any pre-operative conditions such as cold, fever, etc. noted?

YES  NO COMMENT \_\_\_\_\_

Were any other patient's that day exhibiting any potentially infectious conditions?

YES  NO COMMENT \_\_\_\_\_

Do staff members clean equipment between patients?  YES  NO

Do staff members wash hands between patients and at frequent intervals?

YES  NO COMMENT \_\_\_\_\_

Who performed the surgical skin prep? \_\_\_\_\_

What solution was used? \_\_\_\_\_ How long \_\_\_\_\_

Did any members of the health team exhibit signs or symptoms of potentially infectious conditions on the day of surgery?  YES  NO If yes, elaborate \_\_\_\_\_

Were any breaks in technique observed?  YES  NO COMMENT \_\_\_\_\_

Were there any unusual or untoward events during the procedure?  
 YES  NO COMMENT \_\_\_\_\_

What irrigating solutions were used?

Solutions	Amount	Solutions	Amount
_____	_____ cc's	_____	_____ cc's
_____	_____ cc's	_____	_____ cc's
_____	_____ cc's	_____	_____ cc's
_____	_____ cc's	_____	_____ cc's

What instrument tray was used? \_\_\_\_\_

Was a sterilization indicator used in the \_\_\_\_\_ tray \_\_\_\_\_ pack?

Was it wrapped \_\_\_\_\_ or flash \_\_\_\_\_ sterilized?

When was the last biological test performed? \_\_\_\_\_ Results \_\_\_\_\_

Was there a sterilization graph record report for that day, time and load? or manual log?  graph  log

(attach copy of graph or log)

Were any other instruments used in the procedure sterilized in any other fashion?  
 YES  NO COMMENT \_\_\_\_\_

Was the OR cleaned as per procedure between patients?  YES  NO

What was the last recorded date for terminal cleaning in the OR? \_\_\_\_\_

\_\_\_\_\_  
(Environmental Cleaning Record copy attached)

By Whom? \_\_\_\_\_

What were the most recent environmental log reports?

Temperature _____	Date _____
Humidity _____	Date _____
Air Vents _____	Date _____
Filtration _____	Date _____

Was the patient provided written instructions concerning post-operative care?  
 YES  NO By \_\_\_\_\_

Were the instructions verbalized to the patient?  
 YES  NO COMMENT \_\_\_\_\_

His/her sponsor?

YES     NO    COMMENT \_\_\_\_\_

Who assisted the patient in his/her home care? \_\_\_\_\_

What activities did the patient pursue during the first week after his/her surgery?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Were there any other incidences of potential nosocomial infections reported during the last three months?     YES     NO    If yes, list:

NAMES	DATES	ORGANISM
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Findings and Recommendations:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Sentinel Event?  Yes  No

Explanation: Infection resulted in loss of limb, body part or loss of body function.

Instructions:

Complete the above research tool and forward as directed to the Administrative Director.  
Note: Complete Incident Report.

Attachments:            Sterilization records  
                                  Load indicator cards  
                                  Sterilization print out records  
                                  Chemical disinfection log  
                                  Housekeeping records  
                                  Applicable environmental records