

DRAFT FOR DISCUSSION ONLY

Surgical Site Infection Recommendations
Recommendation from Staff

Procedure	Volume (overall rank)*	NIS infection rate (RC 2,3)**	Hospitals impacted with 1 or more procedures*	Potential "0.0" rate** (all risk categories)	
Approved or Recommended					
CABG (coronary artery bypass) both chest & donor incision	2973 (#15)	5.43	11 (19%)	NO	(December 2007 meeting) Approved by Committee
CABG (coronary artery bypass) only chest incision	2525 (#17)	3.72	11 (19%)	YES	(December 2007 meeting) Approved by Committee
Knee replacement	6614(#3)	2.26	49 (86%)	YES	Pros: Large hospital involvement, high consumer/provider interest, Interest from TAG, Other states implementing 2 nd year Cons: 1 year follow-up protocol
Considered					
Hip replacement	5645 (#6)	2.52	49 (86%)	YES	Pros: Large hospital involvement, high consumer/provider interest, Other states implementing 2 nd year, MO year 1 Cons: 1 year follow-up protocol
Colon surgery	5791 (#11)	8.54, 11.25	52 (91%)	NO	Pros: High infection rate, Large hospital involvement, Consensus from TAG Cons: Contamination concerns, Potential to not reach "0.0", No other states reporting
Abdominal Hysterectomy	1825 (#21)	5.17	47 (83%)	YES	Pros: High infection rate, Large hospital involvement, Other state recommendations (VT, SC, MO) Cons: Technical difficulties for implementation
Not being considered					
Cesarean Section	13666 (#1)	7.53	52 (91%)	NO	Pros: High infection rate, Large hospital involvement, Impacts highest volume procedure in State Cons: Implementation burden, Volume burden

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*Source: 2006 Oregon inpatient hospital discharge data, OHPD **Source: National Nosocomial Infections Surveillance (NNIS) System Report, data summary from January 1992 through June 2004, issued October 2004; American Journal of Infection Control 2004;32:470-85.

Central Line Blood Stream Infection
Rationale and Recommendation from Staff

- Infection inclusion
 - Impact
 - CDC estimates 200,000 per year
 - Increased mortality (~14,000-28,000 deaths)¹
 - Increased cost (~ additional \$3,700-29,000)¹
 - Process changes can lead to quality improvement¹
 - Recommended for reporting
 - National organizations
 - AHRQ (with support from AARP, Consumer's Union, SEIU, NAHDO and 17 others)
 - APIC (Association for Professionals in Infection Control and Epidemiology)
 - CDC
 - CMS
 - 63% of states require as part of reporting
 - Collection methods
 - Readily available collection and risk adjustment methodology through National Healthcare Safety Network (CDC)
 - Over 50% of state use NHSN as collection method
 - Ability for adjustment of collection schedule
 - NHSN only requires 1 month per location of data
 - Training and support provided by NHSN staff
 - Requires minimal technology changes from the facility (i.e., internet connection)

Staff Recommendation to Committee

- Central line blood stream infection should be implemented in year 1 of the reporting program for hospitals
- NHSN is the most appropriate, scientifically valid method to collect CLABSI data

¹ Institute for Healthcare Improvement, Getting Started Kit: Prevent Central Line Infections, 2007.

- Collection Location/unit of hospital (defined by NHSN)
 - Recommends targeted unit collection
 - ICU
 - Specialty care units (i.e. hematology, oncology, transplant wards)
 - NICU
 - Inpatient locations (general medical/surgical wards)

Rank of units by CL days (NHSN)	Rank of CLABSI rate (NHSN)	By inclusion of Oregon hospitals with type of unit (AHA survey, 2005)
Medical/Surgical ICU (~326,000)	Burn ICU (6.8/1,000 CL days)	Medical/Surgical wards (57)
Medical ICU (~170,000)	Peds Medical/Surgical ICU (5.3/1,000 CL days)	Medical/Surgical ICU (47)
Surgical ICU (~137,000)	Trauma ICU (4.6/1,000 CL days)	NICU (8)
Peds Medical/Surgical ICU (~48,000)	Neurosurgical ICU (3.5/1,000 CL days)	Peds Medical/Surgical ICU (3)

Staff Recommendation to Committee

- Collection in Medical/Surgical ICU (most CL days, most inclusive of hospitals)
- Collection in Peds Medical/Surgical & NICU (high rate location)
- For hospitals not included
 - Committee develop a collection format using IHI guidelines for CLABSI bundle process measures to be submitted on identical schedule
- Committee outline collection outside of designated ICUs

MSICBD	Medical/surgical intensive care beds
CICBD	Cardiac intensive care beds
NICBD	Neonatal intensive care beds
PEDICBD	Pediatric intensive care beds
SPCICBD	Other special care beds
OTHICBD	Other intensive care beds
BRNBD	Burn care beds
ICUBD	Total ICU beds (calculated field)
GENBD	General medical and surgical (adult) beds
PEDBD	General medical and surgical (pediatric) beds
OBBD	Obstetric care beds
ACUBD	Total acute care beds (calculated field)
NINTBD	Neonatal intermediate care beds
REHABBD	Physical Rehabilitation care beds
ALCHBD	Alcohol/drug abuse or dependency inpatient care beds
PSYBD	Psychiatric care beds
SNBD88	Skilled nursing care beds
ICFBD88	Intermediate nursing care beds
ACULTBD	Acute long term care beds
OTHLBD94	Other long-term care beds
ICFLTCBD	Total intermediate care and long-term care beds
OTHBD94	Other care beds
HOSPBD	Total hospital beds

Source: 2006 AHA Survey

Surgical Care Improvement/Surgical Infection Prevention

The SCIP measures are reported on the CMS Hospital Compare website on a voluntary basis. Currently 53 (93%) of Oregon's hospitals are reporting SCIP measures through the hospital compare website.

Hospitals can reduce the risk of wound infection after surgery by providing the right medicines at the right time on the day of surgery. Studies show a strong association of reduced incidence of post-operative infection with administration of antibiotics within the one hour prior to surgery. After the incision is closed, however, studies show that prolonged administration of prophylaxis with antibiotics may increase the risk of certain other infections at no additional benefit to the surgical patient.

Scientific evidence indicates that the following process of care measures represent the best practices for the prevention of infections after selected surgeries (colon surgery, hip and knee arthroplasty, abdominal and vaginal hysterectomy, cardiac surgery (including coronary artery bypass grafts (CABG)) and vascular surgery). Higher scores are better.

Prophylactic Antibiotic Received Within 1 Hour Prior to Surgical Incision - Surgical patients who received prophylactic antibiotics within 1 hour prior to surgical incision.

Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time - Surgical patients whose prophylactic antibiotics were discontinued within 24 hours after surgery end time.

Prophylactic Antibiotic Selection - Surgical patients who received the recommended antibiotics for their particular type of surgery.

Surgery Patients with Recommended Venous Thromboembolism Prophylaxis Ordered - Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered anytime from hospital arrival to 48 hours after *Surgery End Time*.

Surgery Patients Who Received Appropriate Venous Thromboembolism Prophylaxis Within 24 Hours Prior to Surgery to 24 Hours After Surgery - Surgery patients who received appropriate venous thromboembolism (VTE) prophylaxis within 24 Hours prior to *Surgical Incision Time* to 24 Hours after *Surgery End Time*.



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Process of Care Measure Graphs

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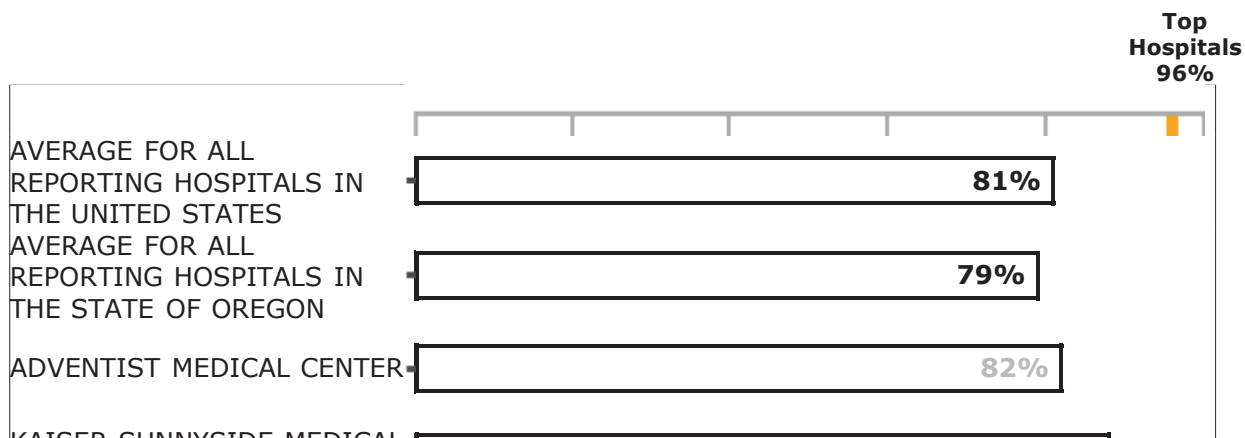
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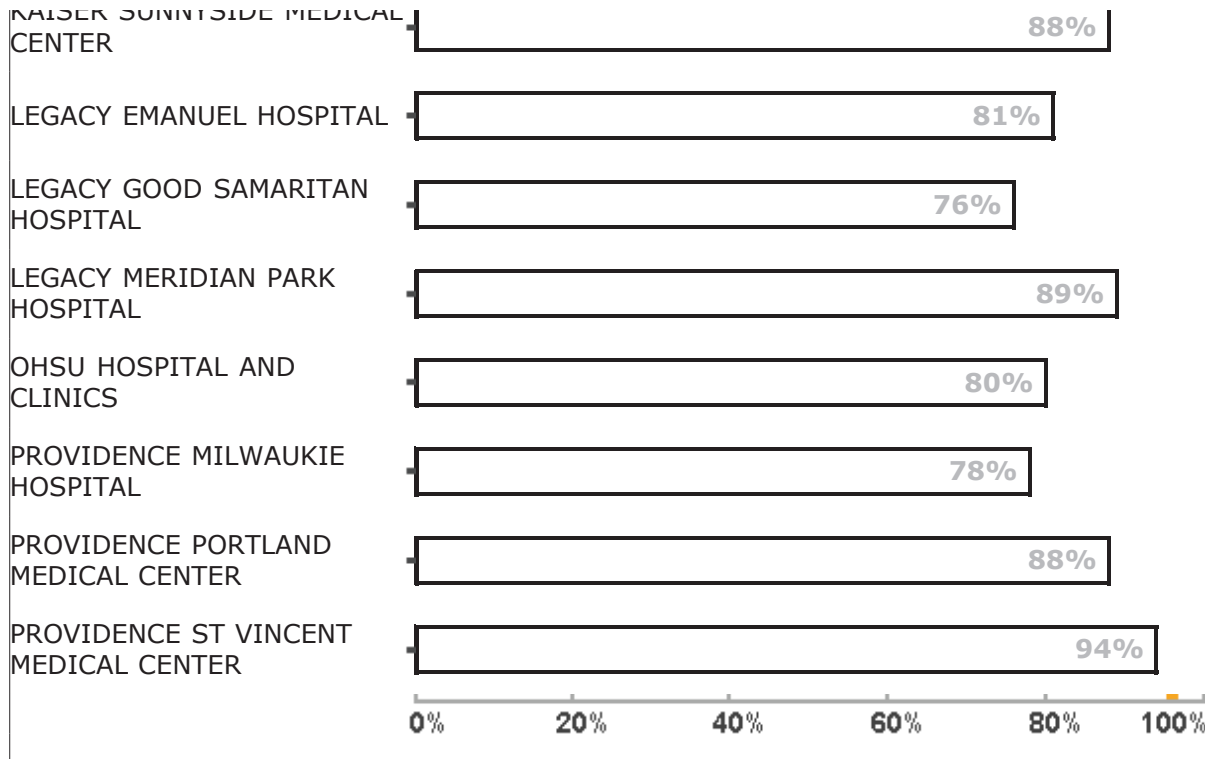
Surgical Care Improvement/Surgical Infection Prevention Graphs

Graph 1 of 5

Percent of Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision

The rates displayed in this graph are from data reported for discharges April 2006 through March 2007.





Top Hospitals represents the top 10% of hospitals nationwide. Top hospitals achieved a 96% rate or better.

Why is this Important?

Antibiotics are medicines to prevent and treat infections. Research shows that surgery patients who get antibiotics within the hour before their operation are less likely to get wound infections. Getting an antibiotic earlier, or after surgery begins, is not as effective. This shows how often hospitals make sure surgery patients get antibiotics at the right time.

Higher percentages are better.

For more information about Surgical Care Improvement/Surgical Infection Prevention Care, [click here](#)

Process of Care Measure Tables

Click here to see quality information in a table. This may be easier to use to compare hospitals side-by-side.

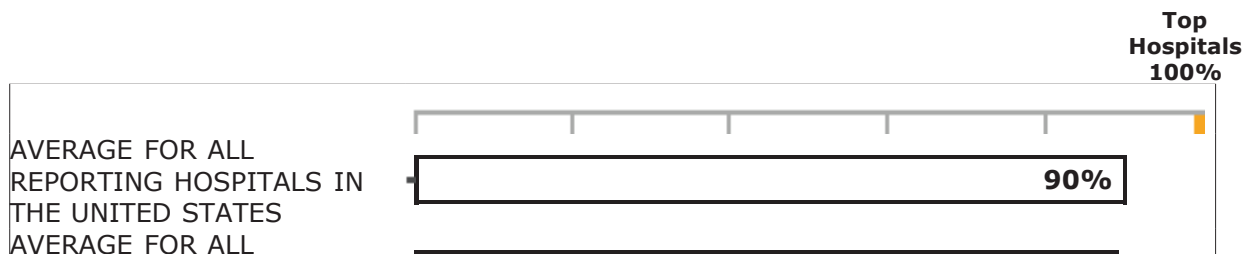


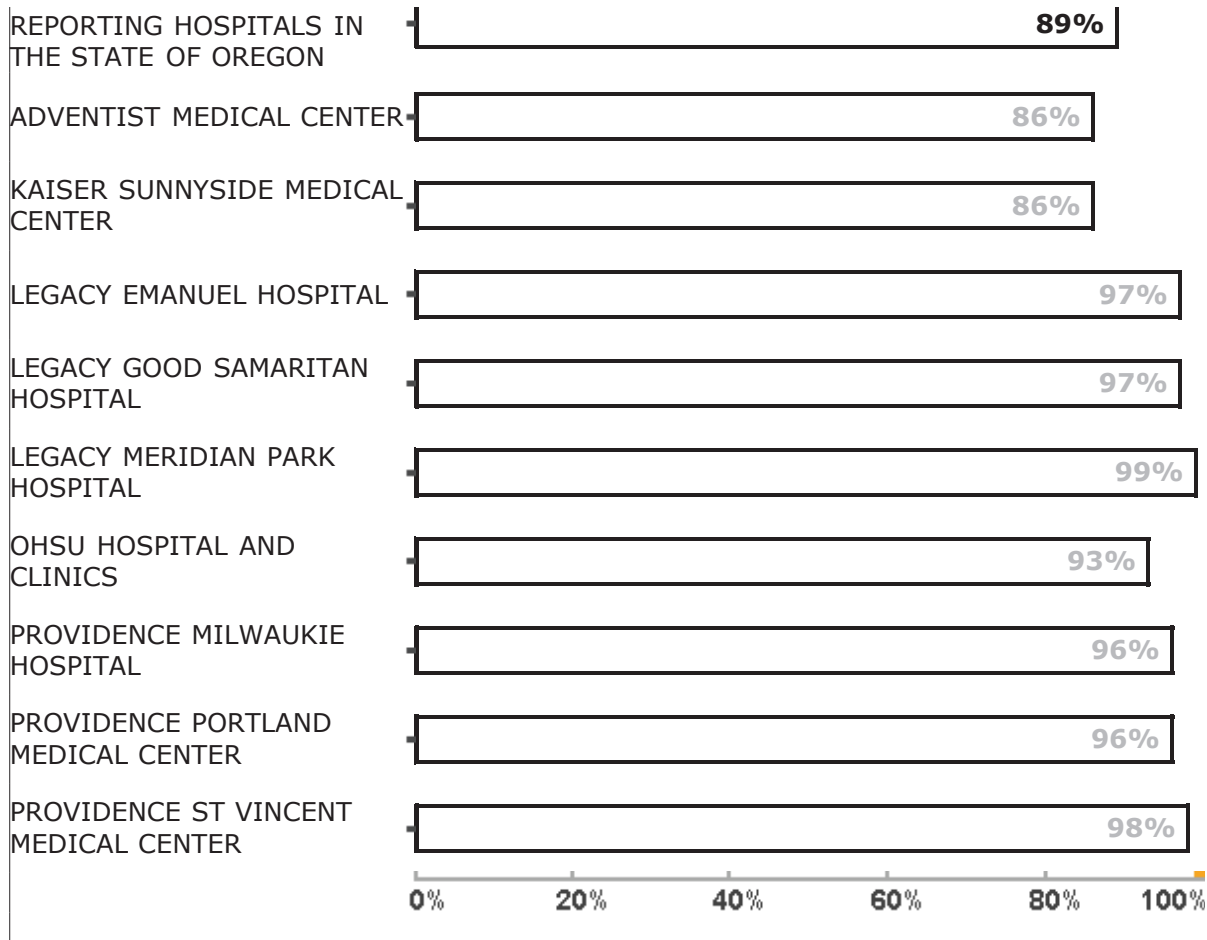
More Graphs Below

Graph 2 of 5

Percent of Surgery Patients Who Received the Appropriate Preventative Antibiotic(s) for Their Surgery

The rates displayed in this graph are from data reported for discharges July 2006 through March 2007.





Top Hospitals represents the top 10% of hospitals nationwide. Top hospitals achieved a 100% rate or better.

Why is this Important?

Certain antibiotics are recommended to help prevent wound infection for particular types of surgery. This measure looks at how often hospital surgical patients get the appropriate antibiotic in order to prevent a surgical wound infection.

Infections continue to be the main preventable complication of most surgical procedures. Antibiotics are medicines to prevent and treat infections. By following the standard guidelines for timing and giving you the correct antibiotic drug, hospitals can reduce your risk of getting a wound infection after surgery.

Hospitals can reduce the risk of wound infection after surgery by making sure patients get the right medicines at the right time on the day of their surgery. These quality measures show some of the standards of care.

Higher percentages are better.

For more information about Surgical Care Improvement/Surgical Infection Prevention Care, [click here](#)

Process of Care Measure Tables

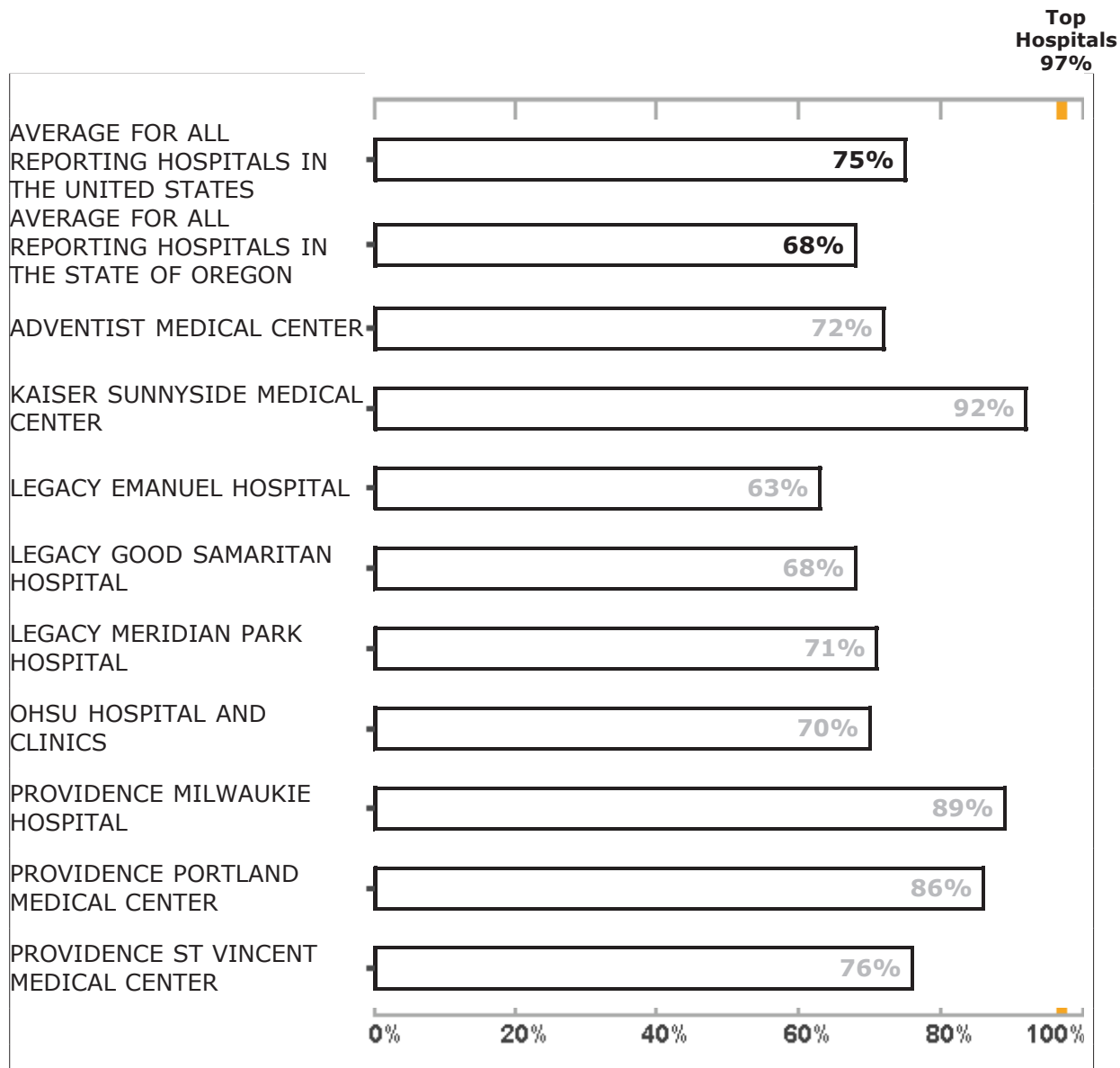
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More Graphs Below

Graph 3 of 5

NEW! Percent of Surgery Patients Who Received Treatment To Prevent Blood Clots Within 24 Hours Before or After Selected Surgeries to Prevent Blood Clots
 The rates displayed in this graph are from data reported for discharges January 2007 through March 2007.



Top Hospitals represents the top 10% of hospitals nationwide. Top hospitals achieved a 97% rate or better.

Why is this Important?

Treatment(s) to prevent blood clots must be given at the right time to prevent blood clots forming after selected surgeries.

Venous thrombosis is a condition in which a blood clot (thrombus) forms in a vein. This clot can limit blood flow, causing swelling, redness and pain. Most commonly, clots occur in the legs, thighs, or pelvis.

If a part or all of the clot breaks off from where it was formed, it can travel through the veins. The part that breaks off is called an embolus. If the embolus lodges in the lung, it is called a pulmonary

embolism, a serious condition that can cause death.

A number of factors can increase a patient’s risk of developing blood clots, but doctors can order preventive treatments called **prophylaxis** to reduce the risk. Prophylaxis may include blood thinning medications, elastic support stockings, or mechanical air stockings that promote circulation in the legs.

Higher percentages are better.

For more information about Surgical Care Improvement/Surgical Infection Prevention Care, [click here](#)

Process of Care Measure Tables

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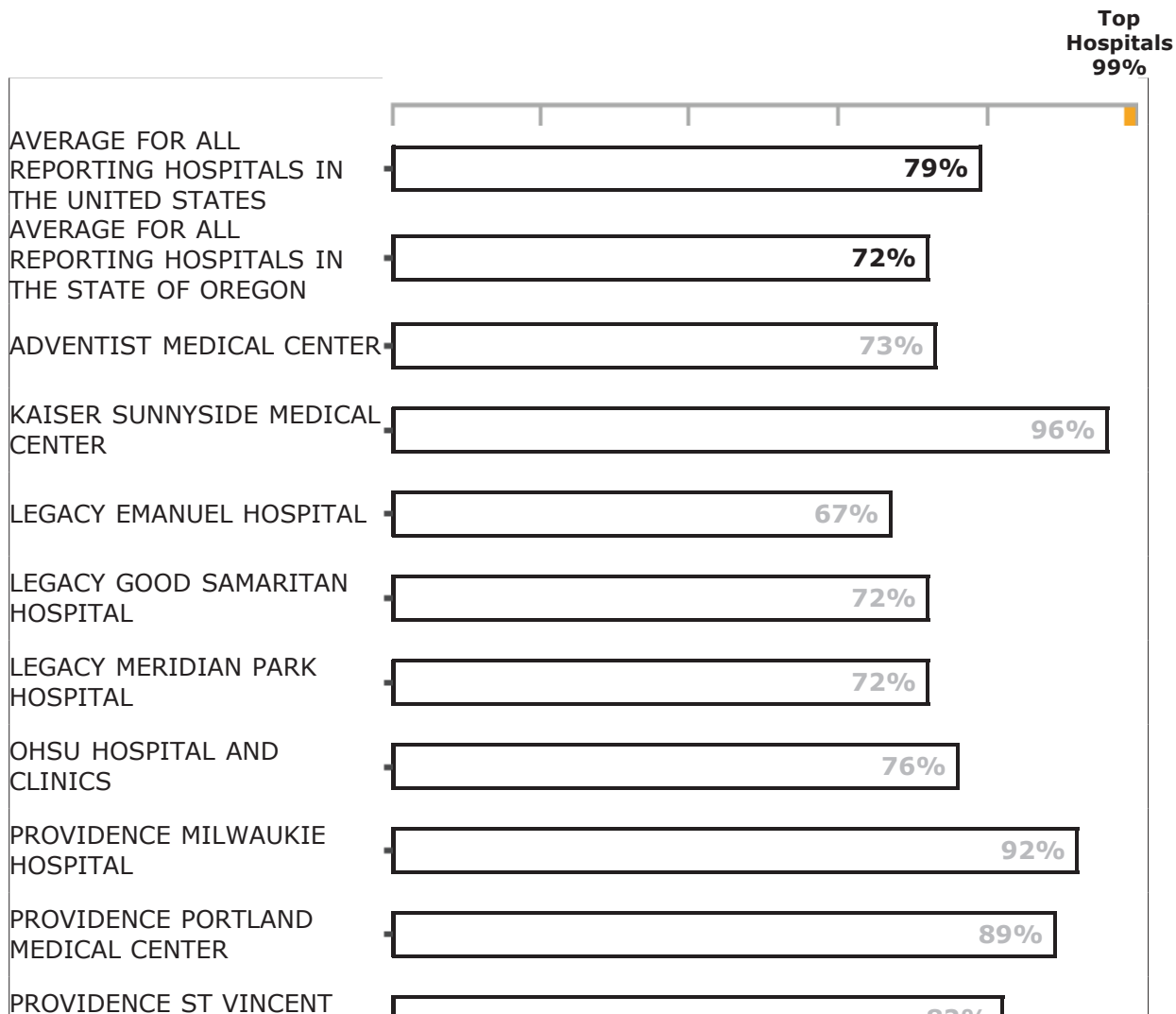


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Graph 4 of 5

NEW! Percent of Surgery Patients Whose Doctors Ordered Treatments to Prevent Blood Clots (Venous Thromboembolism) For Certain Types of Surgeries

The rates displayed in this graph are from data reported for discharges January 2007 through March 2007.





Top Hospitals represents the top 10% of hospitals nationwide. Top hospitals achieved a 99% rate or better.

Why is this Important?

Certain types of surgery can increase the risk of blood clots forming in the veins. This is because patients don't move much during and, usually, after some surgeries.

Venous thrombosis is a condition in which a blood clot (thrombus) forms in a vein. This clot can limit blood flow, causing swelling, redness and pain. Most commonly, clots occur in the legs, thighs, or pelvis.

If a part or all of the clot breaks off from where it was formed, it can travel through the veins. The part that breaks off is called an embolus. If the embolus lodges in the lung, it is called a pulmonary embolism, a serious condition that can cause death.

A number of factors can increase a patient's risk of developing blood clots, but doctors can order preventive treatments called **prophylaxis** to reduce the risk. Prophylaxis may include blood thinning medications, elastic support stockings, or mechanical air stockings that promote circulation in the legs.

Higher percentages are better.

For more information about Surgical Care Improvement/Surgical Infection Prevention Care, [click here](#)

Process of Care Measure Tables

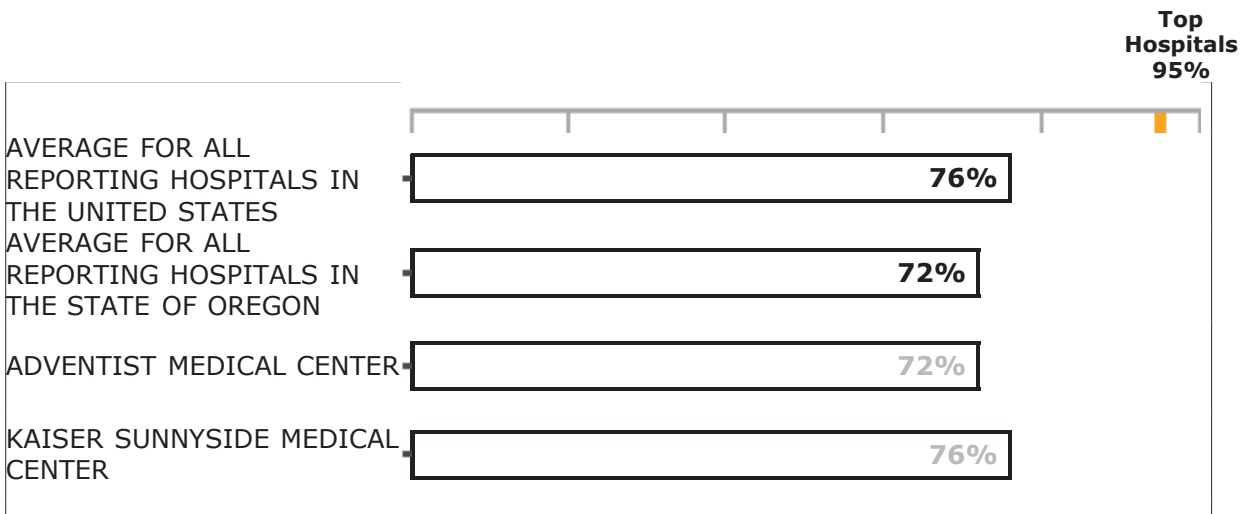
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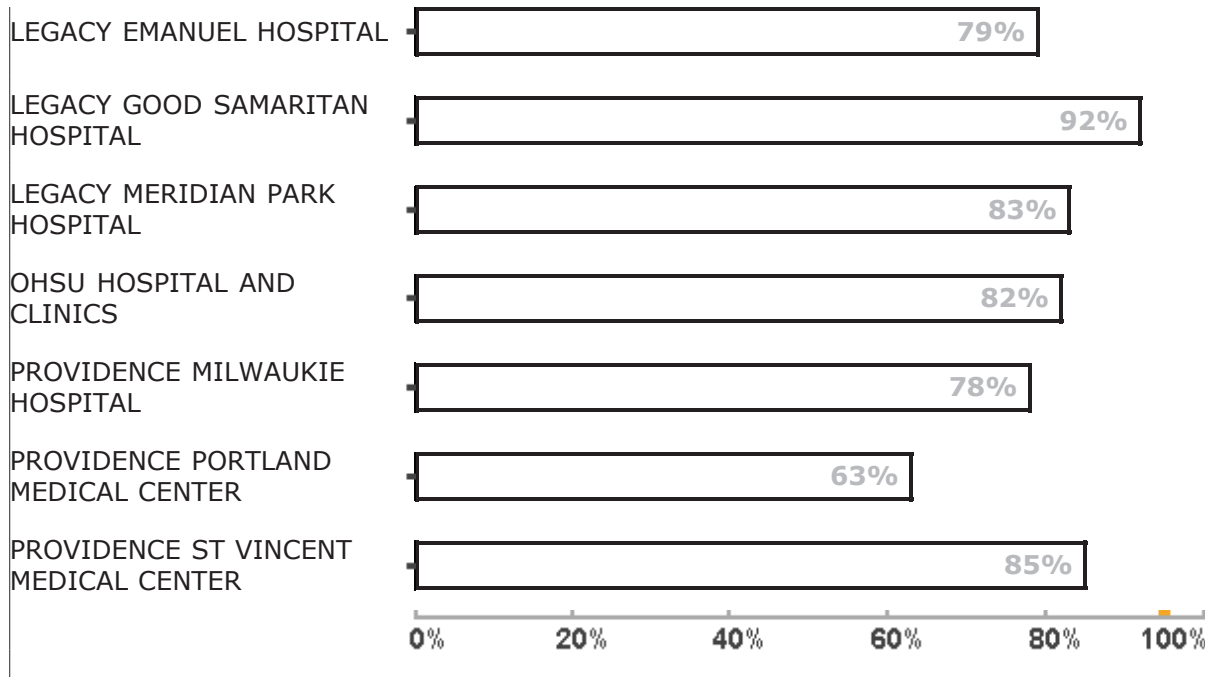


More Graphs Below

Graph 5 of 5

- Percent of Surgery Patients Whose Preventative Antibiotic(s) are Stopped Within 24 hours After Surgery**
The rates displayed in this graph are from data reported for discharges April 2006 through March 2007.





Top Hospitals represents the top 10% of hospitals nationwide. Top hospitals achieved a 95% rate or better.

Why is this Important?

Antibiotics are medicines to prevent and treat infections. While the likelihood of infection after surgery can be reduced by giving patients preventative antibiotics, taking these antibiotics for more than 24 hours after routine surgery is usually not necessary and can increase the risk of side effects such as stomach aches, serious types of diarrhea, and antibiotic resistance (when antibiotics are used too much, they will not work anymore.) There are exceptions – for example, where the surgical site has been contaminated (making the surgery not routine).Talk to your doctor if you have questions about how long you should take antibiotics after surgery.

Higher percentages are better.

For more information about Surgical Care Improvement/Surgical Infection Prevention Care, [click here](#)

[Process of Care Measure Tables](#)

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Page Last Updated: December 12, 2007
 Data Last Updated: December 11, 2007

 [Go to Hospital Compare Homepage](#)

 [Top of page](#)

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44



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Surgical Care Improvement/Surgical Infection Prevention Process of Care Measures - Higher Percentages Are Better (some of the recommended care given to patients if appropriate*)				
Process of Care Measure Click on a measure name to compare all hospitals in a graph	PERCENTAGE FOR ADVENTIST MEDICAL CENTER	PERCENTAGE FOR KAISER SUNNYSIDE MEDICAL CENTER	PERCENTAGE FOR LEGACY EMANUEL HOSPITAL	PERCENTAGE FOR LEGACY GOOD SAMARITAN HOSPITAL
Percent of Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision if appropriate*	82% of 253 patients ²	88% of 216 patients ^{2,3}	81% of 219 patients ^{2,3}	76% of 265 patients ^{2,3}
Percent of Surgery Patients Who Received the Appropriate Preventative Antibiotic(s) for Their Surgery if appropriate*	86% of 203 patients ²	86% of 217 patients ²	97% of 130 patients ^{2,3}	97% of 172 patients ^{2,3}
NEW! Percent of Surgery Patients Who Received Treatment To Prevent Blood Clots Within 24 Hours Before or After Selected Surgeries to Prevent Blood Clots if	72% of 78 patients ²	92% of 91 patients	63% of 51 patients ²	68% of 71 patients ²

appropriate*				
<u>NEW! Percent of Surgery Patients Whose Doctors Ordered Treatments to Prevent Blood Clots (Venous Thromboembolism) For Certain Types of Surgeries</u> if appropriate*	73% of 78 patients ²	96% of 91 patients	67% of 51 patients ²	72% of 71 patients ²
<u>Percent of Surgery Patients Whose Preventative Antibiotic(s) are Stopped Within 24 hours After Surgery</u> if appropriate*	72% of 246 patients ²	76% of 209 patients ^{2,3}	79% of 205 patients ^{2,3}	92% of 240 patients ^{2,3}

Surgical Care Improvement/Surgical Infection Prevention Process of Care Measures -
 Higher Percentages Are Better
 (some of the recommended care given to patients if appropriate*)

Process of Care Measure Click on a measure name to compare all hospitals in a graph	PERCENTAGE FOR LEGACY MERIDIAN PARK HOSPITAL	PERCENTAGE FOR OHSU HOSPITAL AND CLINICS	PERCENTAGE FOR PROVIDENCE MILWAUKIE HOSPITAL	PERCENTAGE FOR PROVIDENCE PORTLAND MEDICAL CENTER
<u>Percent of Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision</u> if appropriate*	89% of 185 patients ^{2,3}	80% of 429 patients ²	78% of 170 patients ²	88% of 354 patients ²
<u>Percent of Surgery Patients Who Received the Appropriate Preventative Antibiotic(s) for Their Surgery</u> if appropriate*	99% of 117 patients ^{2,3}	93% of 292 patients ²	96% of 131 patients ²	96% of 286 patients ²
<u>NEW! Percent of Surgery Patients Who Received Treatment To Prevent Blood Clots Within 24 Hours Before or After Selected Surgeries to Prevent Blood Clots</u> if appropriate*	71% of 68 patients ²	70% of 74 patients ²	89% of 53 patients ²	86% of 65 patients ²
<u>NEW! Percent of Surgery Patients Whose Doctors Ordered Treatments to Prevent Blood Clots (Venous Thromboembolism) For</u>	72% of 68 patients ²	76% of 74 patients ²	92% of 53 patients ²	89% of 65 patients ²

<u>Certain Types of Surgeries</u> if appropriate*				
<u>Percent of Surgery Patients Whose Preventative Antibiotic(s) are Stopped Within 24 hours After Surgery</u> if appropriate*	83% of 173 patients ^{2,3}	82% of 424 patients ²	78% of 161 patients ²	63% of 341 patients ²

Surgical Care Improvement/Surgical Infection Prevention Process of Care Measures -
Higher Percentages Are Better
(some of the recommended care given to patients if appropriate*)

Process of Care Measure Click on a measure name to compare all hospitals in a graph	PERCENTAGE FOR PROVIDENCE ST VINCENT MEDICAL CENTER
<u>Percent of Surgery Patients Who Received Preventative Antibiotic(s) One Hour Before Incision</u> if appropriate*	94% of 393 patients ²
<u>Percent of Surgery Patients Who Received the Appropriate Preventative Antibiotic(s) for Their Surgery</u> if appropriate*	98% of 312 patients ²
<u>NEW! Percent of Surgery Patients Who Received Treatment To Prevent Blood Clots Within 24 Hours Before or After Selected Surgeries to Prevent Blood Clots</u> if appropriate*	76% of 66 patients ²
<u>NEW! Percent of Surgery Patients Whose Doctors Ordered Treatments to Prevent Blood Clots (Venous Thromboembolism) For Certain Types of Surgeries</u> if appropriate*	82% of 66 patients ²
<u>Percent of Surgery Patients Whose Preventative Antibiotic(s) are Stopped Within 24 hours After Surgery</u> if appropriate*	85% of 387 patients ²

* The percentage includes only patients whose history and condition indicate the treatment is appropriate. Talk to your health care provider if you have questions about your treatment.
2: Measure reflects the hospital's indication that its submission was based on a sample of its relevant discharges.
3: Rate reflects fewer than the maximum possible quarters of data for the measure.

Note: Use the information in Hospital Compare with the other information you gather about hospitals as you decide where to get hospital services. You may want to contact your health care provider, your State Survey Agency or your state Quality Improvement Organization (QIO) for more information. If you have a complaint about the quality of the medical care you or a loved one received at a hospital, first contact the hospital's patient advocate. Or, contact your state QIO. If you have other complaints about a health care facility, contact your State Survey Agency. Their phone

numbers can be found at [medicare.gov/Helpful Contacts](http://www.medicare.gov/HelpfulContacts). Additional information about hospitals may be found on the state websites.

[Process of Care Measure Graphs](#)

Provides process of care measure information for all the hospitals that you have selected in bar graph format (for ease in comparison), including National and State averages for each measure.

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Page Last Updated: December 12, 2007

Data Last Updated: December 11, 2007

 [Go to Hospital Compare Homepage](#)

 [Top of page](#)

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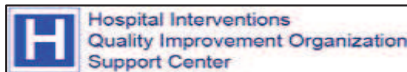
44

Surgical Care Improvement Project (SCIP) Measures

SCIP CROSSWALK *(Revised January 2007)*



MEASURE	DESCRIPTION	CMS	JCAHO	IHI	NQF Endorsed	Publicly Reported	Annual Payment Update (APU)
INFECTION MODULE							
SCIP-Inf 1	On-time prophylactic antibiotic administration	√	√	√	√	√	√
SCIP-Inf 2	Appropriate selection of prophylactic antibiotics*	√	√	√	√	√*	√
SCIP-Inf 3	Prophylactic antibiotics discontinued within 24 hours after surgery	√	√	√	√	√	√
SCIP-Inf 4	Controlled perioperative serum glucose (≤200 mg/dL) among major cardiac surgery patients	√	√		Submitted		
SCIP-Inf 6	Appropriate hair removal	√	√	√	Submitted		
SCIP-Inf 7	Perioperative normothermia among colorectal surgical patients	√	√	√	Submitted		
VENOUS THROMBOEMBOLISM MODULE							
SCIP-VTE 1	Appropriate thromboembolism prophylaxis ordered	√	√	√	√	√*	√
SCIP-VTE 2	Appropriate venous thromboembolism prophylaxis administered perioperatively	√	√	√	√	√*	√
CARDIOVASCULAR MODULE							
SCIP-Card 2	Major surgery patients received beta-blocker perioperatively if they were maintained on a beta-blocker prior to admission	√	√		Submitted		



The Oklahoma Foundation for Medical Quality, the Medicare quality improvement organization for the state of Oklahoma, prepared this material under contract with the Centers for Medicare & Medicaid Services (CMS), an agency of the U.S. Department of Health and Human Services. The contents presented do not necessarily reflect CMS policy. 012_HI-OK0412_0107

** The final Outpatient Prospective Payment System rule published Nov. 18, 2006, in the Federal Register adds SCIP Infection 2 and the two SCIP VTE measures to the list of measures that must be reported in CY 2007 to receive the full Medicare Annual Payment Update.*