

## **SCG4 Prevention of Antibiotic or Herbal Supplement Impairment of Anesthesia**

Percentage of patients, regardless of age, who are prescribed antibiotics or taking natural herbal supplements and undergoing a surgical, therapeutic or diagnostic procedures under anesthesia during the performance period and who have a documented use of a pre-operative assessment for anesthesia impairment AND there was no impairment of the effectiveness of anesthesia

### **2018 OPTIONS FOR INDIVIDUAL MEASURES:**

**SCG Health, US Wound Registry, MiraMed**

**NATIONAL QUALITY STRATEGY DOMAIN:** Patient Safety

**MEASURE TYPE:** Outcome

### **INSTRUCTIONS:**

This measure is to be reported for each patient a minimum of **once per procedure** requiring the use of anesthesia during the reporting period. The most recent quality-data code submitted will be used for performance calculation. There is no diagnosis associated with this measure. It is anticipated that clinicians who provide the listed anesthesia services as specified in the denominator coding will submit this measure.

### **DENOMINATOR:**

All patients, regardless of age, undergoing surgical, therapeutic or diagnostic procedures under anesthesia

#### **Denominator Criteria (Eligible Cases):**

All patients, regardless of age on date of the procedure

#### **AND**

**Patient encounter during the reporting period (CPT):** 00100, 00102, 00103, 00104, 00120, 00124, 00126, 00140, 00142, 00144, 00145, 00147, 00148, 00160, 00162, 00164, 00170, 00172, 00174, 00176, 00190, 00192, 00210, 00211, 00212, 00214, 00215, 00216, 00218, 00220, 00222, 00300, 00320, 00322, 00326, 00350, 00352, 00400, 00402, 00404, 00406, 00410, 00450, 00454, 00470, 00472, 00474, 00500, 00520, 00522, 00524, 00528, 00529, 00530, 00532, 00534, 00537, 00539, 00540, 00541, 00542, 00546, 00548, 00550, 00560, 00600, 00604, 00620, 00625, 00626, 00630, 00632, 00635, 00640, 00670, 00700, 00702, 00730, 00740, 00750, 00752, 00754, 00756, 00770, 00790, 00792, 00794, 00796, 00797, 00800, 00802, 00810, 00820, 00830, 00832, 00834, 00836, 00840, 00842, 00844, 00846, 00848, 00851, 00860, 00862, 00864, 00865, 00866, 00868, 00870, 00872, 00873, 00880, 00882, 00902, 00904, 00906, 00908, 00910, 00912, 00914, 00916, 00918, 00920, 00921, 00922, 00924, 00926, 00928, 00930, 00932, 00934, 00936, 00938, 00940, 00942, 00944, 00948, 00950, 00952, 01112, 01120, 01130, 01140, 01150, 01160, 01170, 01173, 01180, 01190, 01200, 01202, 01210, 01212, 01214, 01215, 01220, 01230, 01232, 01234, 01250, 01260, 01270, 01272, 01274, 01320, 01340, 01360, 01380, 01382, 01390, 01392, 01400, 01402, 01404, 01420, 01430, 01432, 01440, 01442, 01444, 01462, 01464, 01470, 01472, 01474, 01480, 01482, 01484, 01486, 01490, 01500, 01502, 01520, 01522, 01610, 01620, 01622, 01630, 01634, 01636, 01638, 01650, 01652, 01654, 01656, 01670, 01680, 01682, 01710, 01712, 01714, 01716, 01730, 01732, 01740, 01742, 01744, 01756, 01758, 01760, 01770, 01772, 01780, 01782, 01810, 01820, 01829, 01830, 01832, 01840, 01842, 01844, 01850, 01852, 01860, 01924, 01925, 01926, 01930, 01931, 01932, 01933, 01935, 01936, 01951, 01952, 01961, 01962, 01963, 01965, 01966

**NUMERATOR:**

Percentage of patients who have a documented use of a pre-operative assessment of antibiotic drug combination or natural herbal supplement usage where the procedure did not result in an impairment of anesthesia AND the patient did not experience a decrease effectiveness of anesthesia

**Definitions:**

**Natural Herbal Supplement** – A product containing one or more vitamins, herbs, enzymes, amino acids, or other ingredients, that is taken orally to supplement one's diet, as by providing a missing nutrient.

**Checklist or Protocol** – The pre-operative antibiotic drug combination or natural herbal supplement usage checklist assessment should be followed by direct intervention on the identified risk. The key elements that must be included in the individualized, multifactorial antibiotic drug combination or natural herbal supplement usage assessment protocol or checklist may include, but are not limited to the assessment of:

1. Confirmation of prescribed medications with primary care and other physicians involved in the care of the patient
2. Discussing all antibiotic drug combinations or natural herbal supplement usage with the patient
3. Documentation and discussion with the patient of potential complications based upon current antibiotic drug combinations or natural herbal supplement usage when combined with anesthesia and surgical procedure
4. All surgical team members should have an active role in determining how the potential impairment of anesthesia effectiveness will be prevented and managed during the procedure

**Preoperative** – Documentation of record within the 30 minutes immediately before the start time of a procedure.

**Numerator Instructions:** All components should be completed once per procedure per patient and should be documented in the medical record as having been performed during the measurement period.

**Numerator Options:****Performance Met:**

Preoperative checklist of all antibiotic drug combinations or natural herbal supplement usage, documented in the medical record; procedure did not result in an impairment of anesthesia AND the patient documented not to have experienced a decrease in the effectiveness of anesthesia

**OR****Performance Not Met:**

Preoperative antibiotic drug combinations or natural herbal supplement usage risk assessment not completed, reason not otherwise specified

**OR****Performance Not Met:**

Preoperative checklist of all antibiotic drug combinations or natural herbal supplement usage, documented in the medical record; procedure did result in an impairment of anesthesia, patient documented not to have experienced a decrease in the effectiveness of anesthesia

**OR****Performance Not Met:**

Preoperative checklist of all antibiotic drug combinations or natural herbal supplement usage, documented in the medical record; procedure did not result in an impairment of anesthesia; patient documented to have experienced decrease in effectiveness of anesthesia

**RISK ADJUSTED:** Yes, by age, chronic conditions such as COPD/Asthma and length of surgery and anesthesia administration.

**RATIONALE:**

All surgeries present an antibiotic drug combination or natural herbal supplement usage concern for both patients and surgical staff. Preoperative checklists or prevention method risk screening may assist in recognizing potential dangers and prevent an impairment or decrease in anesthesia effectiveness from occurring. Data elements required for the measure can be captured and the measure is actionable by the clinician.

**CLINICAL RECOMMENDATION STATEMENT:**

Colistin, otherwise known as Polymyxin E, is a drug seeing a resurgence in use against multi-drug-resistant Gram negative bacteria, in particular *Acinetobacter*, *E-coli*, *Klebsiella*, and *P. aeruginosa*. a case where an individual receiving Colistin to treat a multi-drug-resistant *Acinetobacter* required surgery and intubation. Unaware of the implication of the antibiotic treatment, the anesthesiologist administered a small, 20-mg dose of Rocuronium to facilitate intubation. This resulted in a very deep and prolonged period of neuromuscular blockade, requiring almost 24 hours before measurable evidence of spontaneous recovery of neuromuscular function, and 48 hours of ventilatory support (Black).

Many herbal products are marketed as "natural" or "homeopathic," which may lead consumers to assume the products are safe, even when taken with prescription medicines, Dr. Rispler noted. "Herbal supplements can have a negative impact on patients both before and following surgery, and may interact with conventional medicines used to manage chronic conditions. Most surgery-related side effects can be avoided by stopping the CAM product at least one to two weeks prior to surgery and during the postoperative period while prescription medications such as blood thinners or antibiotics are being used. The problem arises when physicians do not know that a patient is using a CAM product, Dr. Rispler said.

**Works Cited:**

Black, David, M.D., Novel Antibiotics and Anesthesia-Related Drug Interactions, The Official Journal of the Anesthesia Patient Safety Foundation, 2012

American Academy of Orthopaedic Surgeons. "Herbal supplements may cause dangerous drug interactions in orthopaedic surgery patients, study suggests." ScienceDaily. ScienceDaily, 11 October 2011. <[www.sciencedaily.com/releases/2011/10/111011102103.htm](http://www.sciencedaily.com/releases/2011/10/111011102103.htm)>.

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