Measure ASPS 25: Avoidance of Post-operative Systemic Antibiotics for Office-based Reconstruction After Skin Cancer Resection Procedures

This measure may be used as an Accountability measure.

Measure Description

Percentage of patients aged 18 and older who underwent reconstruction after skin cancer resection in the office-based* setting who were prescribed post-operative systemic antibiotics to be taken immediately following reconstruction surgery (inverse measure)

Measure Components	
Numerator Statement	Patients who were prescribed post-operative systemic antibiotics to be taken immediately following surgery (inverse measure)
Denominator Statement	All patients aged 18 and older who underwent reconstruction after skin cancer resection in the office-based* setting *Office based: not billed with an ASC or inpatient facility code
Denominator Exceptions	Medical reason exceptions for patients with wounds breaching the oral, nasal, genitourinary or anal mucosa; immunosuppressed patients (such as those on immunosuppressive medications); patients with lymphedema; on antibiotics prescribed by another physician; or exposed cartilage/bone; Clinical evidence of infection at time of reconstruction
Denominator Exclusions	Patients presenting for reconstruction after skin cancer resection with Cancer involving the lower extremity or who receive cartilage grafting
Supporting Guideline	**3b. The Work Group recommends that clinicians should not routinely administer perioperative systemic antibiotics for adult patients undergoing reconstruction after skin cancer resection in the office-based setting.** **Evidence Quality: Moderate** **Recommendation Strength: Moderate** Chen et al, ASPS, Reconstruction After Skin Cancer Resection Guideline 2019, in press
Measure Importance	

Rationale/ Opportunity for Improvement	Based on the preponderance of evidence, in the *office setting*, it is recommended that clinicians *not* administer routine perioperative systemic antibiotics. Benefits of avoiding antibiotic prophylaxis include cost savings, absence of antibiotic side effects, prevention of drug-drug interactions, reduced time delay prior to reconstruction, avoidance of complications associated with oral or intravenous administration, and lack of contribution to antibiotic resistance. Potential risks and harms include medicolegal vulnerability if an infection occurs. Patient education on the need for antibiotic stewardship may help convey to patients that antibiotic prophylaxis is not without risk, and avoidance of such may be in their best interest. This measure is limited to procedures in the office-based setting. Procedures done in the hospital or ambulatory surgical center are often larger operations and are governed by "SCIP" protocol for antibiotic use, the Surgical care Improvement Project which dictates antibiotic selection for surgical patients. Gap in care: A 2019 study by Barbieri et al. characterized temporal trends in antibiotic prescribing patterns of dermatologists and associated patient diagnoses and outcomes from January 2008-December 2016. During this time, postoperative oral antibiotics associated with surgical visits increased dramatically by nearly 70%, from 3.92 courses per 100 surgical visits (95% CI, 3.83-4.01) to 6.65 courses per 100 surgical visits (95% CI, 6.57-6.74). Additionally, the study authors note in their discussion that a 2012 survey sent to members of the American College of Mohs Surgery identified many surgeon prescribing patterns that were not aligned with guideline recommendations concluding that dermatologic surgeons prescribe more antibiotics than needed for infection prevention. 30% of survey members reported that they were unfamiliar with the Journal of the American Academy of Dermatology 2008 advisory statement on antibiotic prophylaxis in dermatologic surgery (Bae-Harboe & Liang, 2013). In this study, 10% of respondents prescribed a postoperative antibiotic for most of their Mohs surgery cases, while 30.4% prescribed the same for any breach of the oral mucosa, regardless of a patient's medical history; 17% also prescribed the same for surgical flap cases regardless of surgical site. Less than 40% of respondents noted that they do not routinely administer postoperative antibiotics. As a voluntary, self-reported survey with no audit of provider practice, it is likely this study actually underestimates the overutilization of postoperative antibiotics.

Exception Justification	Exceptions to this recommendation and measure are appropriate for reconstructions in special high-risk populations, such as those requiring large or complex reconstructions, those with clean-contaminated or chronic wounds, or those with medical histories or co-morbidities associated with immunosuppression or elevated risk of infection. Below-knee surgery has been shown to have a higher infection rate (Heal et al 2006; Heal et al 2012; Smith et al 2014). The reasons for this are unclear, but reduced perfusion pressure in the distal limbs (Syladis 1997), higher tension closures (Rosengren et al 2012), as well as the frequent necessity for complex graft/flap surgery are postulated reasons.
Harmonization with Existing Measures	There are no relevant antibiotic overuse measures.
Measure Designation	
Measure Purpose	Accountability Quality Improvement
Type of Measure	Process
Care Setting	Ambulatory care
Data Source	Medical record (paper or EHR), administrative data
Guidance	Reconstruction After Skin Cancer Resection: Reconstructive options may include tissue rearrangement, grafts, or flaps. Primary or complex linear closures are not included. See the specifications at the end of the document for exact codes included in each measure.

Measure ASPS 25: Avoidance of Post-operative Systemic Antibiotics for Office-based Reconstruction After Skin Cancer Resection Procedures

<table>
<tr><td>Denominator (Eligible Population)</td><td>All patients aged 18 and older who underwent reconstruction after skin cancer resection in the office-based* setting

Office based: not billed with an ASC or inpatient facility code

Age ≥ 18 years

AND

CPT® for Encounter:
14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061
15100,15120
15200, 15220, 15240, 15260
15570, 15572, 15574, 15576
15740, 15760
40525, 40527
67971, 67973, 67974, 67975

AND

ICD-10 Codes for most common skin cancers:
C43-C44
D03-D04

AND
Place of Service Code: 11 (office)

Code descriptions - for reference only:
<table>
<tr><td>Code Range</td><td>Descriptors</td></tr>
<tr><td>14000 - 14061</td><td>Adjacent Tissue Transfer</td></tr>
<tr><td>15100 - 15120</td><td>Split Thickness Grafts</td></tr>
<tr><td>15200 - 15260</td><td>Full Thickness Grafts</td></tr>
<tr><td>15570 -15576</td><td>Formation of direct or tubed pedicle</td></tr>
<tr><td>15740</td><td>Island Pedicle Flap</td></tr>
<tr><td>15760</td><td>Composite Skin Graft</td></tr>
<tr><td>40525 - 40527</td><td>Excision of lip, with flap</td></tr>
<tr><td>67971 - 67975</td><td>Reconstruction of Eyelid</td></tr>
</table>
</td></tr>
<tr><td>Denominator Exclusions</td><td>Codes for exclusion of skin cancer on lower legs, for which procedures have a higher risk of infection.

ICD-10 Codes:

BCC – C44.711, C44.712, C44.719

SCC – C44.721, C44.722, C44.729

MM – C43.710, C43.711, C43.712</td></tr>
</table>

	MMIS – D03.70, D03.71, D03.72 SCCIS – D04.70, D04.71, D04.72 Cartilage grafts: 21230, 21235, 20910, 20912
Numerator	Patients who were prescribed post-operative systemic antibiotics to be taken immediately following surgery (inverse measure) Captured by attestation in the work flow of the QCDR
Denominator Exceptions	Medical reason exceptions include patients with a history of: • Lymphedema I89.0, I89.1, I89.8, I89.9 • History of immunosuppressive medications Z92.24 • Immunodeficiency syndromes D82.0, D82.1, D82.2, D82.3, D82.4, D82.8, D82.9 • HIV B20 • Antibiotics currently being taken for another reason (listed in documentation of current medications) • Clinical evidence of infection at time of reconstruction