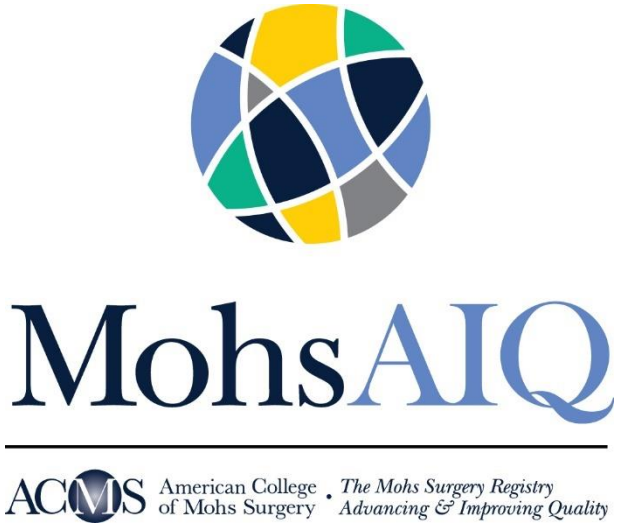


# MohsAIQ QCDR 2022 MIPS Measure Detail

# Contents:

**Measure Title -** ACMS3 Antibiotic Prophylaxis for High Risk Cardiac / Orthopedic Cases prior to Mohs micrographic surgery - Prevention of Overuse

**Measure Description-** Percentage of cases of Mohs surgery in which preoperative prophylactic antibiotics were provided for which the patient had cardiac / orthopedic prophylaxis indications for preoperative antibiotics.

**Denominator-** All Mohs surgery cases in patients, regardless of age or gender, who received preoperative prophylactic antibiotics associated with their Mohs procedure during the performance period (CPT or HCPCS): 17311 or 17312

**Numerator-** All Mohs surgery cases in patients, regardless of age or gender, at high risk of infective endocarditis and/or hematogenous total joint infection with high risk surgical site with documentation that preoperative antibiotic was administered prior to the surgery. Numerator instructions: Of cases defined in denominator, all cases for which the patient received preoperative antibiotic will be reported. Definitions:

1. High risk for infective endocarditis

• Prosthetic heart valve

• Previous infective endocarditis

• Congenital heart disease (CHD)

o Unrepaired cyanotic CHD, including palliative shunts and conduits

o Completely repaired congenital heart defects with prosthetic material or device, whether placed by a surgical or catheter intervention, during the first 6 months after procedure

o Repaired CHD with residual defects at site or adjacent to site of prosthetic patch or prosthetic device (which inhibits endothelialization)

• Cardiac transplant patients who have developed cardiac valvulopathy

2. Definition: High risk for hematogenous total joint infection

• First 2 years following joint replacement

• Previous prosthetic joint infection

• Total joint replacement with any of the following:

o immunocompromised/immunosuppressed patients

o Insulin dependent diabetes (type 1)

o HIV infection

o Malignancy

o Malnourishment

o Hemophilia

3. High Risk Surgical Site – surgical site that breaches the oral mucosa or involves infected skin

**Denominator exclusions-** None

**Denominator/exceptions-**None

**Numerator exclusions-**None

**Primary Data Source Used For Abstraction-** Registry

**Registry Name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable-**NA

**High priority status-**Yes

**High priority type-** Patient Safety

**Measure type-**Process

**National Quality Strategy (NQS) domain-**Patient Safety

**Care Setting-** Ambulatory, Ambulatory Care: Clinician Office/clinic, Ambulatory Surgery Center, Office Based Surgery Center, Outpatient Services

**Included Telehealth?** No

**Which Meaningful Measure Area applies to this measure?** Healthcare-associated Infections

**Meaningful Measure Area Rationale-** This measure identifies the percentage of cases of Mohs surgery in which preoperative prophylactic antibiotics for cardiac / orthopedic prophylaxis indications were appropriately prescribed based on clinical guidelines.

**ANALYTICS**

**Measure calculation type-** proportional measure

**Performance Rate Description (Optional)**

**Indicate an Overall Performance Rate-** 1st performance rate

**Risk adjusted status-** No

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity testing summary-** We assessed face validity on whether the performance scores obtained by the measure as specified can be used to distinguish good and poor quality across 16 physicians. The mean score, the average of responses between 1 (strongly disagree) and 5 (strongly agree), was calculated to be 4.00, which is higher than the critical threshold of 3. The percentage of responses that agreed or strongly agreed with the validity assessment question was 62.50%.

**Feasibility Testing Summary (Optional)-** N/A

**Reliability Testing Summary (Optional)-** N/A

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** No link to Cost Measure

No link to Improvement Activity

**Clinical Recommendation Statement-** Consensus guidelines have been developed to define the proper use of preoperative antibiotics prior to dermatologic surgery procedures. Using data extrapolated from dental, orthopedic, and cardiac societies, consensus guidelines for cardiac and orthopedic prophylaxis prior to cutaneous surgery were developed. Since the development of these guidelines there has been some data to suggest there continues to be a practice gap. This measure seeks to measure appropriate use of prophylactic antibiotics, promoting responsible antibiotic stewardship.

**Rationale for the QCDR Measure-** The incidence of infectious complications associated with Mohs Micrographic surgery is low. Consensus guidelines have been developed to define the proper use of preoperative antibiotics. Using data extrapolated from dental, orthopedic, and cardiac societies, consensus guidelines for cardiac and orthopedic prophylaxis prior to cutaneous surgery were developed by dermatologists. Since the development of these guidelines, there has been some data to suggest there continues to be a practice gap. In a survey amongst Mohs surgeons, 55% of respondents reported giving inappropriate antibiotics to prevent infective endocarditis in patients with prosthetic heart valves involving non-oral, non-infected surgical sites. Additionally, 62.7% of respondents inappropriately gave antibiotics to patients with joint replacements in the last 2 years in non-oral/non-infected surgical sites. Antibiotics have been implicated in up to 19.3% (78.8% of which were allergy related) visits to emergency departments. Methicillin resistant Staphylococcus aureus (MRSA) has been estimated to cost third party payers between $478 million and $2.2 billion depending on the definitions used. Given the risk posed by antibacterial resistance appropriate stewardship of antibiotics is important.

1. Wilson, W. et al. Prevention of infective endocarditis: guidelines from the American Heart Association: a guideline from the American Heart Association Rheumatic Fever, Endocarditis, and Kawasaki Disease Committee, Council on Cardiovascular Disease in the Young, and the Council on Clinical Cardiology, Council on Cardiovascular Surgery and Anesthesia, and the Quality of Care and Outcomes Research Interdisciplinary Working Group. Circulation 116, 1736–1754 (2007).

2. Rethman, M. P. et al. The American Academy of Orthopaedic Surgeons and the American Dental Association clinical practice guideline on the prevention of orthopaedic implant infection in patients undergoing dental procedures. J. Bone Joint Surg. Am. 95, 745–747 (2013).

3. Affleck, A. G., Birnie, A. J., Gee, T. M. & Gee, B. C. Antibiotic prophylaxis in patients with valvular heart defects undergoing dermatological surgery remains a confusing issue despite apparently clear guidelines. Clin. Exp. Dermatol. 30, 487–489 (2005).

4. Wright, T. I. et al. Antibiotic prophylaxis in dermatologic surgery: advisory statement 2008. J. Am. Acad. Dermatol. 59, 464–473 (2008).

5. Camins, B. C. et al. Impact of an antimicrobial utilization program on antimicrobial use at a large teaching hospital: a randomized controlled trial. Infect. Control Hosp. Epidemiol. 30, 931–938 (2009).

6. Shehab, N., Patel, P. R., Srinivasan, A. & Budnitz, D. S. Emergency Department Visits for Antibiotic-Associated Adverse Events. Clin. Infect. Dis. 47, 735–743 (2008).

7. Lee, B. Y. et al. The Economic Burden of Community-Associated Methicillin-Resistant Staphylococcus aureus (CA-MRSA). Clin. Microbiol. Infect. Off. Publ. Eur. Soc. Clin. Microbiol. Infect. Dis. 19, 528–536 (2013).

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-**

"Time Period: 1/1/2019 - 7/20/2021

Eligible Clinicians: 100

Performance Range: 100%

Performance Average: 58.01%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** Yes

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional)**
Consensus guidelines have been developed to define the proper use of preoperative antibiotics. Using data extrapolated from dental, orthopedic, and cardiac society's consensus guidelines for cardiac and orthopedic prophylaxis prior to cutaneous surgery were developed by dermatologists. Antibiotic prophylaxis in dermatologic surgery: advisory statement 2008. J. Am. Acad. Dermatol. 59, 464–473 (2008).

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology, Other

**Other specialties**- Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Cutaneous oncology

**QCDR Notes (Optional)**

**Measure Title -** ACMS4 Surgical Site Infection Rate - Mohs Micrographic Surgery

**Measure Description-** Percentage of cases of Mohs surgery that develop a surgical site infection. This measure is to be reported each time a procedure for a Mohs surgery is performed whether or not a surgical site infection develops during the performance period.

**Denominator-** All Mohs surgery cases, regardless of patient age or gender, during the performance period (CPT): 17311 or 17312

**Numerator-** All Mohs surgery cases, regardless of patient age or gender, during the performance period that develop a superficial incisional surgical site infection. - Definition: Superficial incisional SSI is an infection that occurs within 30 days after the operation and infection involves skin or subcutaneous tissue of the incision and at least one of the following:

o Purulent drainage, with or without laboratory confirmation

o Organisms isolated from an aseptically obtained culture of fluid or tissue from the superficial incision

o At least one of the following signs or symptoms of infection: pain or tenderness, localized swelling, erythema, heat

o Diagnosis of superficial incisional SSI by the surgeon or attending physician

**Denominator exceptions-**N/A

**Denominator exclusions**-N/A

**Numerator exclusions-**N/A

**Primary Data Source Used For Abstraction**- Registry

**Registry Name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable-**NA

**High priority status**-Yes

**High priority type-**Outcome

**Measure type-** Outcome

**National Quality Strategy (NQS) domain**-Patient Safety

**Care setting-Ambulatory, Ambulatory Care-** Clinician Office/clinic, Ambulatory Surgery Center, Office-based Surgery Center, Outpatient Services

**Includes Telehealth-** No

**Which Meaningful Measure Area applies to this measure?** Healthcare-associated infections

**Meaningful Measure Area Rationale-** This measure identifies rates of surgical site infection following Mohs micrographic surgery cases

**ANALYTICS**

**Measure calculation type-** Inverse measure, proportional measure

**Number of performance rates required for measures**-1

**Performance Rate Description (Optional)**

**Indicate an Overall Performance Rate-** 1st performance rate

**Risk adjusted status-** No

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity Testing Summary-** We assessed face validity on whether the performance scores obtained by the measure as specified can be used to distinguish good and poor quality across 16 physicians. The mean score, the average of responses between 1 (strongly disagree) and 5 (strongly agree), was calculated to be 4.44, which is higher than the critical threshold of 3. The percentage of responses that agreed or strongly agreed with the validity assessment question was 87.50%.

**Feasibility Testing Summary (Optional) -** NA

**Reliability Testing Summary (Optional) –** NA

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** No link To Cost Measure

No link to Improvement Activity

**Clinical Recommendation Statement-** Surgical site infection after Mohs surgery is an adverse surgical outcome. As a healthcare associated cause of harm, it is important to measure and report infection rates. It is feasible to collect the data and produces reliable and valid results about the quality of care. It is useful and understandable to stakeholders. This measure addresses the National Quality Strategy Priorities, and was identified by an expert panel of Mohs surgery providers to be a critical outcome for this procedure. This measure addresses a high-impact condition as it is one of the most common skin cancer treatment procedures performed in the U.S. All populations are included. The measure allows measurement across the person-centered episode of care out to 30 days after the procedure.

**Rationale for the QCDR Measure**- Published infection rates following Mohs surgery vary by provider and center with overall, non-risk stratified rates ranging from 0.5% to 4.1%. Smith H, et al. Randomized Controlled Trial of Preoperative Topical Decolonization to Reduce Surgical Site Infection for Staphylococcus aureus Nasal Swab-Negative Mohs Micrographic Surgery Patients. Dermatol Surg. 2019 Feb;45(2):229-33
O'Neill JL, et al. Comparing demographic characteristics and adverse event rates at two dermatologic surgery practices. J Cutan Med Surg. 2014 Oct;18(5):337-40.
Liu A, Lawrence N. Incidence of infection after Mohs micrographic and dermatologic surgery before and after implementation of new sterilization guidelines. J Am Acad Dermatol. 2014 Jun;70(6):1088-91.

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups) –**
"Time Period: 1/1/2019 - 7/20/2021
Eligible Clinicians: 127
Performance Range: 25%
Performance Average: 1.13%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** Yes

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional)**

**Published infection rates following Mohs surgery vary by provider and center with overall, non-**risk stratified rates ranging from 0.5% to 4.1%. Smith H, et al. Randomized Controlled Trial of Preoperative Topical Decolonization to Reduce Surgical Site Infection for Staphylococcus aureus Nasal Swab-Negative Mohs Micrographic Surgery Patients. Dermatol Surg. 2019 Feb;45(2):229-33

O'Neill JL, et al. Comparing demographic characteristics and adverse event rates at two dermatologic surgery practices. J Cutan Med Surg. 2014 Oct;18(5):337-40.

Liu A, Lawrence N. Incidence of infection after Mohs micrographic and dermatologic surgery before and after implementation of new sterilization guidelines. J Am Acad Dermatol. 2014 Jun;70(6):1088-91.

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology, Other

**Other specialties-** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Cutaneous Oncology

**QCDR Notes (Optional**

**Measure Title -** ACMS5 Documentation of high-risk Squamous Cell Carcinoma Stage in Mohs Micrographic Surgery record

**Measure Description-** Percentage of Mohs surgery cases for high-risk cutaneous squamous cell carcinoma (SCC) of the head and neck for which America Joint Committee on Cancer (AJCC) 8th edition staging1, that was documented in the medical record. For these purposes high-risk is defined as a tumor stage greater than T2.

**Denominator-** All diagnoses of squamous cell carcinoma (ICD-10-CM: C44.02, C44.22, C44.32, C44.42) regardless of patient age or gender, that meet AJCC8 criteria for a high-risk SCC (stage >T2) encountered within the performance period.

**Numerator-** Number of high-risk head and neck cutaneous squamous cell carcinoma cases (as defined above) regardless of patient age or gender for which an AJCC 8th edition T stage is documented.

**Denominator exclusions-** • Squamous cell carcinoma <2cm in diameter.

• Squamous cell carcinoma in non-head and neck locations where the current 8th edition of the AJCC does not apply (ICD-10-CM): C44.52, C44.62, C44.72, C44.82, C44.92). Or Squamous cell carcinoma of the eyelid, which has an alternative AJCC 8 staging criteria dictated by size and depth of invasion rather than histologic diagnosis.

**Denominator exceptions-** N/A

**Numerator exclusions-** N/A

**Numerator exceptions-**N/A

**Primary Data Source Used For Abstraction-** Registry

**Registry name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable-**NA

**High priority status-**Yes

**High priority type-**Process

**National Quality Strategy (NQS) domain-**Communication and Care Coordination

**Care setting-** Ambulatory Clinician Office/clinic, Ambulatory Surgery Center, Office-based Surgery Center, Outpatient Services

**Includes Telehealth?** No

**Which Meaningful Measure Area applies to this measure?** Transfer of health information and interoperability

**Meaningful Measure Area Rationale-** This measure identifies the percentage of Mohs surgery cases for high risk cutaneous squamous cell carcinoma for which the AJCC8 stage was documented in the medical record.

**ANALYTICS**

**Measure calculation type-** proportional

**Number of performance rates to be calculated and submitted-**1

**Performance Rate Description (Optional)**

**Indicate an Overall Performance Rate-** 1st performance rate

**Risk adjusted status-** No

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc.?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity testing summary-** We assessed face validity on whether the performance scores obtained by the measure as specified can be used to distinguish good and poor quality across 16 physicians. The mean score, the average of responses between 1 (strongly disagree) and 5 (strongly agree), was calculated to be 4.13, which is higher than the critical threshold of 3. The percentage of responses that agreed or strongly agreed with the validity assessment question was 68.75%.

**Feasibility Testing Summary (Optional)-** NA

**Reliability Testing Summary (Optional)-** NA

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity**- No link to Cost Measure

No link to Improvement Activity

**Clinical Recommendation Statement-** Proper communication between the cutaneous oncologic surgeon / Mohs surgeon and other treating providers is critical in assuring that appropriate follow up care as well as diagnostic tests and treatments are provided. During Mohs surgery, clinical and histologic staging information is commonly obtained that is not available from initial pathology results or medical notes. AJCC edition 8 is the current standard for staging cutaneous squamous cell carcinoma. Updated AJCC8 staging information should be provided in the medical record.

**Rationale for the QCDR Measure**- Documentation for MMS includes two components - the description of the surgery and the pathological report. Staging of cSCC has been recently updated with AJCC8 with improved ability to distinguish cSCC at high risk for metastasis and mortality. AJCC staging is the standard language to communicate cancer risk between physicians. However, inclusion

of AJCC stage in Mohs reports is not standard of care and not usually performed. Moreover, requirement to report staging is not addressed in Mohs Surgery LCD's insurer documentation requirements. Extra information not typically reported in Mohs notes is required including measurement of tumor depth and involved nerve caliber.

Cutaneous squamous cell carcinoma is the second most common type of skin cancer. While the majority of SCCs are readily treated by ambulatory destruction or excision procedures, recent studies have shown poor discrimination between low and high-risk tumors in previously used staging criteria.2–6 A subset of SCC will develop poor outcomes including overall local recurrence rates of 3-5%, nodal metastasis rates of 4% and disease specific death rates of 1.5%, which have been reported.7,8 Poor outcomes can be predicted by a number of variables including: tumor size, invasion beyond subcutaneous tissue, perineural invasion in large caliber or subdermal nerves, or bony erosion which are included in the current staging schema.1 There are additional variables that that identify the potential for poor outcomes including aggressive histopathology (poorly differentiated, desmoplastic)8, recurrent status9, and immunosuppression10. While these data points may be included in future staging algorithms, they are currently not part of the staging criteria.

These improved risk stratification criteria have been incorporated into the 8th edition of the AJCC which was implemented by tumor registrars in January 2018. Compared to prior staging systems, this cancer staging system has improved distinctiveness (outcomes different between stages), homogeneity (outcomes are similar within a stage) and monotonicity (outcomes worsen with increasing stage).2 As such, tumor (T) staging should be one, if not the, primary determinant for increased clinical surveillance, screening imaging tests, or consideration for adjuvant therapy. A documented tumor stage will improve awareness of the staging system and create a mechanism for evidence-based management of SCC across institutions and disciplines. While these criteria will help the clinician better risk stratify patients, further studies are required to determine what additional measures should be taken, although some preliminary data suggests that adjuvant therapies, such as radiotherapy11 or systemic chemotherapy12 may be helpful. A need for improved documentation and reporting has previously been demonstrated in the setting of transplant eligibility.13 It has also been shown to be an important metric in improving communication between pathologists and other providers in the setting of melanoma (Quality ID # 397 – melanoma reporting). Staging documentation will ensure that appropriate clinical follow up is achieved, imaging occurs, and recurrences are decreased and identified early.

Mohs surgery documentation records clinical and pathological features required for the accurate staging of cutaneous squamous cell carcinoma that are not typically found in the pathology record for the initial biopsy. Currently, tumor staging comment is not typically provided nor is standard of care in Mohs micrographic surgery documentation.

Existing analogous metrics:

1. NQF-0386: Oncology: Cancer stage documented.

2. Quality ID #397. NQF N/A. Melanoma reporting

3. NQF-0087: Age-related macular degeneration (AMD) Dilated Macular Examination.

4. NQF-0088: Diabetic Retinopathy: Documentation of Presence or Absence of Macular

Edema and Level of Severity of Retinopathy.

1. AJCC Cancer Staging Manual. (American College of Surgeons, 2017).

2. Karia, P. S. et al. Evaluation of American Joint Committee on Cancer, International Union Against Cancer, and Brigham and Women's Hospital tumor staging for cutaneous squamous cell carcinoma. J. Clin. Oncol. Off. J. Am. Soc. Clin. Oncol. 32, 327–334 (2014).

3. Baum, C. L. et al. A new evidence-based risk stratification system for cutaneous squamous cell carcinoma into low, intermediate, and high risk groups with implications for management. J. Am. Acad. Dermatol. 78, 141–147 (2018).

4. Cañueto, J. et al. Comparing the eighth and the seventh editions of the American Joint Committee on Cancer staging system and the Brigham and Women's Hospital alternative staging system for cutaneous squamous cell carcinoma: Implications for clinical practice. J. Am. Acad. Dermatol. 80, 106-113.e2 (2019).

5. Gonzalez, J. L., Cunningham, K., Silverman, R., Madan, E. & Nguyen, B. M. Comparison of the American Joint Committee on Cancer Seventh Edition and Brigham and Women's Hospital Cutaneous Squamous Cell Carcinoma Tumor Staging in Immunosuppressed Patients. Dermatol. Surg. Off. Publ. Am. Soc. Dermatol. Surg. Al 43, 784–791 (2017).

6. Karia, P. S., Morgan, F. C., Califano, J. A. & Schmults, C. D. Comparison of Tumor Classifications for Cutaneous Squamous Cell Carcinoma of the Head and Neck in the 7th vs 8th Edition of the AJCC Cancer Staging Manual. JAMA Dermatol. (2017). doi:10.1001/jamadermatol.2017.3960

7. Rogers, H. W. et al. Incidence estimate of nonmelanoma skin cancer in the United States, 2006. Arch. Dermatol. 146, 283–287 (2010).

8. Brantsch, K. D. et al. Analysis of risk factors determining prognosis of cutaneous squamous-cell carcinoma: a prospective study. Lancet Oncol. 9, 713–720 (2008).

9. Harris, B. N. et al. Factors Associated with Recurrence and Regional Adenopathy for Head and Neck Cutaneous Squamous Cell Carcinoma. Otolaryngol.--Head Neck Surg. Off. J. Am. Acad. Otolaryngol.-Head Neck Surg. 156, 863–869 (2017).

10. Que, S. K. T., Zwald, F. O. & Schmults, C. D. Cutaneous squamous cell carcinoma: Incidence, risk factors, diagnosis, and staging. J. Am. Acad. Dermatol. 78, 237–247 (2018).

11. Miller, J., Chang, T., Schwartz, D., Peters, M. & Baum, C. Outcomes of Adjuvant Radiotherapy Following Negative Surgical Margins for Cutaneous Squamous Cell Carcinoma. Dermatol. Surg. Off. Publ. Am. Soc. Dermatol. Surg. Al (2019). doi:10.1097/DSS.0000000000001827

12. Fitzgerald, K. & Tsai, K. K. Systemic therapy for advanced cutaneous squamous cell carcinoma. Semin. Cutan. Med. Surg. 38, E67–E74 (2019).

13. Garrett, G. L., Yuan, J. T., Shin, T. M., Arron, S. T. & Transplant Skin Cancer Network (TSCN). Validity of skin cancer malignancy reporting to the Organ Procurement Transplant Network: A cohort study. J. Am. Acad. Dermatol. 78, 264–269 (2018).

14. Karia, P. S. et al. Evaluation of American Joint Committee on Cancer, International Union Against Cancer, and Brigham and Women's Hospital tumor staging for cutaneous squamous cell carcinoma. J. Clin. Oncol. Off. J. Am. Soc. Clin. Oncol. 32, 327–334 (2014).

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-**

"Time Period: 1/1/2019 - 7/20/2021

Eligible Clinicians: 79

Performance Range: 100%

Performance Average: 66.04%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** Yes

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional)**

The following are results from a survey sent to members of the American College of Mohs Surgery to determine if there is a practice gap to be addressed by this performance measure. The survey was administered by Dr. Brandon Brown, a Mohs surgeon at the University of Florida. These data indicate a significant gap with only 23% of Mohs surgeons documenting AJCC8 stage in the medical record.

1) Is the clinical tumor size of cSCC documented in the Mohs Op Note?
Yes: 98.32%
No: 1.68%

2) Is observed depth of tumor (i.e. dermis, subQ, fascia, muscle, bone) documented?
Yes: 75.98%
No: 24.02%

3) Is a microscopic measurement of the depth of the tumor included in the operative report? (reported as millimeters below adjacent granular layer)
Yes: 3.91%
No: 96.09%

4) Is perineural invasion documented in the operative report? (Including clinical or radiographic involvement of a named nerve, subdermal nerve involvement, nerve caliber measurement)
Yes: 93.26%
No: 6.74%

5) Is cortical bony erosion documented? (Including minor bony erosion, marrow invasion, skull foramen invasion)
Yes: 82.58%
No: 17.42%

6) Is the AJCC8 stage for all cSCC treated by Mohs surgery documented in the Mohs Op report?
Yes: 8.38%
No: 91.61%

7) Is the AJCC8 state for high risk cSCC (defined as T2 or greater) treated with Mohs surgery documented in the Mohs op report?
Yes: 23.46%
No: 76.54%

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties-** Dermatology, Other

**Other Specialties-** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Cutaneous Oncology

**QCDR Notes (optional)**

**Measure Title -** ACMS8 Limit quantity of opioids prescribed for pain management in patients following MMS

**Measure description-** Percentage of patients prescribed opioids for pain management following Mohs surgery who received ten or fewer pills.

**Denominator-** All Mohs surgery cases in patients, regardless of age or gender, who received a prescription for oral opioid pain medication prior to or at the time of surgical discharge from the Mohs surgeon.

**Numerator-** The number of Mohs cases for which the patient prescribed opioids received ten or fewer pills and no refills.

**Denominator exclusions-** Patients who are already on an opioid prior to the surgery; patients undergoing the following same day reconstruction procedures: Abbe-Estlander flap, 40527; Adjacent tissue transfer>30cm2, any area, 14301; Filleted finger or toe flap, 14350; Paramedian forehead flap, 15731. Patients with Mohs surgical involvement of the fingertip or toe.

**or groups) Denominator exceptions-**N/A

**Numerator exclusions**-N/A

**Primary Data Source Used For Abstraction-** Registry

**Registry Name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable-**NA

**High priority measure-**Yes

**High Priority Type-** Opioid-related measure

**Measure type-**Process

**National Quality Strategy (NQS) domain-**Patient safety

**Meaningful measure area-** Prevention and Treatment of Opioid and Substance Use Disorders

**Care setting-**Ambulatory, Ambulatory Care: Clinician Office/Clinic, Ambulatory Surgery Center, Office-based Surgical Center Outpatient Services

**Includes Telehealth**-No

**Which Meaningful Measure Area applies to this measure?** Prevention and treatment of Opioid and substance use disorders

**Meaningful Measure Area Rationale-** This measure documents the percentage of Mohs surgery cases prescribed an opioid prescription that received 10 or fewer pills.

**ANALYTICS**

**Measure Calculation Type-** Proportional

**Number of performance rates to be calculated and submitted-**1

**Performance Rate Description (Optional)**

**Indicate overall performance Rate-** 1st performance rate

**Risk adjusted-**No

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity Testing Summary-** We assessed face validity on whether the performance scores obtained by the measure as specified can be used to distinguish good and poor quality across 16 physicians. The mean score, the average of responses between 1 (strongly disagree) and 5 (strongly agree), was calculated to be 4.19, which is higher than the critical threshold of 3. The percentage of responses that agreed or strongly agreed with the validity assessment question was 81.25%.

**Feasibility Testing Summary (Optional)**

**Reliability Testing Summary (Optional)**

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** No link to Cost

No link to Improvement Activity

**Clinical recommendation statement-**Most patients undergoing cutaneous surgery do not require opioid analgesics for pain management. In the small subset of patients who may need opioids to manage their pain, the number of pills required is typically less than a 3 day supply. Prescribing a large number of pills has been demonstrated to lead to misuse, diversion, and improper disposal. Therefore, limiting the number prescribed when opioids are deemed necessary for pain management will lead to fewer pills available for improper usage.

Rationale for the QCDR Measure- Rationale: The United States is in the midst of an opioid healthcare epidemic. Prescribing narcotics for analgesia after procedures for which they aren't necessary and dispensing excess opioids for procedures when smaller quantities would suffice contribute to this problem.1,2 Opioid dependence has been demonstrated to start with a prescription following an acute injury or surgery, and the likelihood of chronic use increases with as few as 3 days of use.3 Additionally, many patients who receive opioid prescriptions do not use the medication and are left with excess pills that may be subject to future misuse, theft, or improper disposal.4 One study found that 86% of patients who filled their opioid prescription had remaining pills and only 4% planned to dispose of them properly.5 It has been estimated that nearly 7000 patients will continue to use opioids for at least one year after dermatologic surgery and 500,000 unused opioid pills per year are

introduced into the patient population through overprescribing by dermatologists.6 For the majority of patients, pain following Mohs micrographic surgery is typically short-lived, peaking at a mean pain score of 2 or 3 out of 10 on the day of surgery (as soon as 4 hours postoperatively) before returning rapidly toward baseline. 7–10

Considering this information, it is important to limit the number of patients who receive opioid prescriptions after Mohs surgery. However, in some instances, narcotics may be necessary to properly manage a patient's postoperative pain.7 for patients who may require postoperative opioids to adequately control pain it is important to limit the quantity of pills provided so they will not be subject to diversion. The CDC guidelines recommend prescribing the lowest effective dose of immediate release opioids for acute pain and suggest 3 days or less is often sufficient.12 Almost all patients prescribed opioids after cutaneous surgery take them for less than 36 hours and many only take 1 pill.5,7,8,10 Based on this information and expert opinion, a recent literature review recommends limiting the quantity of opioids prescribed to 36 hours of analgesia (or 6 pills considering 1 pill every 6 hours as needed).12

Guidelines for appropriate circumstances to prescribe postoperative opioids for dermatologic surgery have been lacking. A recent study has attempted to provide guidance for this vexing problem. 13 A panel of experts utilized a 4-step modified Delphi method to generate consensus guidelines for opioid-naive patients. Through this process, they determined that the majority of dermatologic procedures do not require opioids for pain management. Those that require opioid analgesia are limited to flaps in specific anatomic locations such as the scalp, nose, ear, lip, and perineum. In addition, surgeries involving nail avulsion may require narcotic pain management. In almost all cases, the maximum quantity of narcotics recommended was ten (range 1-10) 5mg oxycodone oral equivalents.

References

1. Jones CM. Heroin use and heroin use risk behaviors among nonmedical users of prescription opioid pain relievers - United States, 2002-2004 and 2008-2010. Drug Alcohol Depend. 2013;132(1-2):95-100. doi:10.1016/j.drugalcdep.2013.01.007

2. Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. :156.

3. Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use - United States, 2006-2015. MMWR Morb Mortal Wkly Rep. 2017;66(10):265-269. doi:10.15585/mmwr.mm6610a1

4. Centers for Disease Control and Prevention (CDC). Adult use of prescription opioid pain medications - Utah, 2008. MMWR Morb Mortal Wkly Rep. 2010;59(6):153-157.

5. Harris K, Curtis J, Larsen B, et al. Opioid Pain Medication Use After Dermatologic Surgery: A Prospective Observational Study of 212 Dermatologic Surgery Patients. JAMA Dermatol. 2013;149(3):317-321. doi:10.1001/jamadermatol.2013.1871

6. Cao S, Karmouta R, Li DG, Din RS, Mostaghimi A. Opioid Prescribing Patterns and Complications in the Dermatology Medicare Population. JAMA Dermatol. 2018;154(3):317-322. doi:10.1001/jamadermatol.2017.5835

7. Firoz BF, Goldberg LH, Arnon O, Mamelak AJ. An analysis of pain and analgesia after Mohs micrographic surgery. Journal of the American Academy of Dermatology. 2010;63(1):79-86. doi:10.1016/j.jaad.2009.10.049

8. Sniezek PJ, Brodland DG, Zitelli JA. A randomized controlled trial comparing acetaminophen, acetaminophen and ibuprofen, and acetaminophen and codeine for postoperative pain relief after Mohs surgery and cutaneous reconstruction. Dermatol Surg. 2011;37(7):1007-1013. doi:10.1111/j.1524-4725.2011.02022.x

9. Merritt BG, Lee NY, Brodland DG, Zitelli JA, Cook J. The safety of Mohs surgery: a prospective multicenter cohort study. J Am Acad Dermatol. 2012;67(6):1302-1309. doi:10.1016/j.jaad.2012.05.041

10. Limthongkul B, Samie F, Humphreys T. Assessment of Postoperative Pain After Mohs Micrographic Surgery. Dermatologic Surgery. 2013;39(6):857-863. doi:10.1111/dsu.12166

11. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. JAMA. 2016;315(15):1624-1645. doi:10.1001/jama.2016.1464

12. Lopez JJ, Warner NS, Arpey CJ, et al. Opioid prescribing for acute postoperative pain after cutaneous surgery. J Am Acad Dermatol. 2019;80(3):743-748. doi:10.1016/j.jaad.2018.09.032

13. McLawhorn JM, Stephany MP, Bruhn WE, et al. An expert panel consensus on opioid-prescribing guidelines for dermatologic procedures. Journal of the American Academy of Dermatology. 2020;82(3):700-708. doi:10.1016/j.jaad.2019.09.080

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians**

"Time Period: Last 7 Months

Eligible Clinicians: 127

Performance Range: 100%

Performance Average: 21.00%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** No

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional)-**

1. Jones CM. Heroin use and heroin use risk behaviors among nonmedical users of prescription opioid pain relievers - United States, 2002-2004 and 2008-2010. Drug Alcohol Depend. 2013;132(1-2):95-100. doi:10.1016/j.drugalcdep.2013.01.007

2. Results from the 2010 National Survey on Drug Use and Health: Summary of National Findings. :156.

3. Shah A, Hayes CJ, Martin BC. Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use - United States, 2006-2015. MMWR Morb Mortal Wkly Rep. 2017;66(10):265-269. doi:10.15585/mmwr.mm6610a1

4. Centers for Disease Control and Prevention (CDC). Adult use of prescription opioid pain medications - Utah, 2008. MMWR Morb Mortal Wkly Rep. 2010;59(6):153-157.

5. Harris K, Curtis J, Larsen B, et al. Opioid Pain Medication Use After Dermatologic Surgery: A Prospective Observational Study of 212 Dermatologic Surgery Patients. JAMA Dermatol. 2013;149(3):317-321. doi:10.1001/jamadermatol.2013.1871

6. Cao S, Karmouta R, Li DG, Din RS, Mostaghimi A. Opioid Prescribing Patterns and Complications in the Dermatology Medicare Population. JAMA Dermatol. 2018;154(3):317-322. doi:10.1001/jamadermatol.2017.5835

7. Firoz BF, Goldberg LH, Arnon O, Mamelak AJ. An analysis of pain and analgesia after Mohs micrographic surgery. Journal of the American Academy of Dermatology. 2010;63(1):79-86. doi:10.1016/j.jaad.2009.10.049

8. Sniezek PJ, Brodland DG, Zitelli JA. A randomized controlled trial comparing acetaminophen, acetaminophen and ibuprofen, and acetaminophen and codeine for postoperative pain relief after Mohs surgery and cutaneous reconstruction. Dermatol Surg. 2011;37(7):1007-1013. doi:10.1111/j.1524-4725.2011.02022.x

9. Merritt BG, Lee NY, Brodland DG, Zitelli JA, Cook J. The safety of Mohs surgery: a prospective multicenter cohort study. J Am Acad Dermatol. 2012;67(6):1302-1309. doi:10.1016/j.jaad.2012.05.041

10. Limthongkul B, Samie F, Humphreys T. Assessment of Postoperative Pain After Mohs Micrographic Surgery. Dermatologic Surgery. 2013;39(6):857-863. doi:10.1111/dsu.12166

11. Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain—United States, 2016. JAMA. 2016;315(15):1624-1645. doi:10.1001/jama.2016.1464

12. Lopez JJ, Warner NS, Arpey CJ, et al. Opioid prescribing for acute postoperative pain after cutaneous surgery. J Am Acad Dermatol. 2019;80(3):743-748. doi:10.1016/j.jaad.2018.09.032

13. McLawhorn JM, Stephany MP, Bruhn WE, et al. An expert panel consensus on opioid-prescribing guidelines for dermatologic procedures. Journal of the American Academy of Dermatology. 2020;82(3):700-708. doi:10.1016/j.jaad.2019.09.080

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology, Other

**Other specialties:** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category**- Cutaneous Oncology

**QCDR Notes**-N/A

**Measure Title – ACMS9 Post-Operative Management of Field Cancerization after Mohs Micrographic Surgery**

**Measure Description –** Percentage of patients founds to have field cancerization on Mohs sections whose referring physician receives notification and recommendations for considering field therapy post wound healing.

**Denominator –** All Mohs surgery cases in patients who were noted to have field cancerization on Mohs histology sections as documented on the Mohs map or operative note.

**Numerator –** Of patients with field cancerization noted on the Mohs map or operative note, the number of cases where the referring physician receives notification and recommendations for considering field therapy post wound healing.

**Denominator exclusions –** Patients where residual field cancerization was treated by the Mohs surgeon via medical or procedural therapy.

**Denominator/exceptions -** None

**Numerator exclusions -** None

**Primary Data Source Used For Abstraction -** Registry

**Registry Name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable -** NA

**High priority status-** Yes

**High priority type –** Care Coordination

**Measure type-** Process

**National Quality Strategy (NQS) domain-** Communication and Care Coordination

**Care Setting – Ambulatory Care:** Clinician Office/Clinic, Ambulatory Surgical Center, Office Based Surgery Center, Outpatient Services

**Included Telehealth? -** No

**Which Meaningful Measure Area applies to this measure?** – Promote Effective Communication & Coordination of Care

**Meaningful Measure Area Rationale –** This measure will provide value by informing the referring provider about the presence of field cancerization that may be underappreciated clinically. Appropriate identification and treatment field cancerization is proven to 1) reduce keratosis burden, 2) the potential for invasive squamous cell carcinoma and, 3) reduce overall cost burden of skin cancer.

**Indicate an Overall Performance Rate –** 1st Performance Rate

**Risk adjusted status -** No

**Clinical Recommendation Statement –** Patients with field cancerization have an elevated risk of invasive keratinocyte carcinoma. Field directed treatment should be considered for those patients as it is proven to reduce the burden of actinic keratosis, future development of keratinocyte carcinoma and the cost of skin cancer management.

**Rationale for the QCDR Measure –** Mohs surgeons routinely note the presence of field cancerization on Mohs histology. Noting the presence of field cancerization, in many cases prior to clinically recognizable disease, Mohs surgeons have the unique opportunity to enhance tertiary prevention. The presence of field cancerization is a known risk factor for the development of invasive keratinocyte carcinoma. Therapy of the surgical field and surrounding tissue is effective in reducing morbidity from actinically damaged skin. Alerting the referring provider to the presence of field cancerization allows for early intervention through institution of field directed treatment of actinic keratosis or focal in situ squamous cell carcinoma. In a recent survey of Mohs surgeons, 45% of respondents reported that they do not always document the presence of residual or incidental actinic keratosis that should be treated with nonsurgical modalities on the Mohs map. Furthermore, 67% of respondents do not always document this finding in the procedure/operative note and 60% of respondents rarely or never document the extent or type of actinic keratosis (atrophic, acantholytic, hyperplastic, Bowenoid) found at the surgical margin. Amongst respondents, 19% never and 47% rarely or only sometimes communicate the extent or type of actinic keratosis found on the Mohs margin to the referring provider. Nineteen percent of members never provide referring providers any communication regarding field cancerization highlighting the existing performance gap.

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?**

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology

**Other specialties** – Cutaneous oncology

**Preferred measure published clinical category-** Cutaneous oncology

**QCDR Notes**-N/A

**Measure Title – ACMS10 Photographic and/or Anatomic Map Documentation to Prevent Wrong-Site Surgery**

**Measure Description –** Percentage of cases of Mohs Micrographic Surgery undertaken where a photograph and/or anatomic drawing of the biopsy site location is utilized to identify the operative site and documented in the chart.

**Denominator –** All Mohs Micrographic surgery cases performed, irrespective of patient age or gender.

**Numerator –** The number of Mohs Micrographic surgery cases where a photograph and/or anatomic drawing of a biopsy site location is utilized for the identification of the correct site prior to beginning surgery and documented in the medical record.

**Denominator exclusions –** All Mohs Micrographic surgery cases in which a biopsy with frozen section pathology analysis was performed to establish the diagnosis of cutaneous malignancy with same day subsequent Mohs surgery.

**Denominator/exceptions -** None

**Numerator exclusions -** None

**Primary Data Source Used For Abstraction -** Registry

**Registry Name-** ACMS MohsAIQ Registry

**National Quality Forum (NQF) number, if applicable -** NA

**High priority status-** Yes

**High priority type –** Patient Safety

**Measure type-** Process

**National Quality Strategy (NQS) domain-** Patient Safely

**Care Setting –** Ambulatory Care: Clinician Office/Clinic, Ambulatory Surgical Center, Office Based Surgery Center, Outpatient Services

**Included Telehealth? -** No

**Which Meaningful Measure Area applies to this measure?** – Preventable Healthcare Harm

**Meaningful Measure Area Rationale –** This measure promotes the utilization and documentation of photographs and/or anatomic drawings to provide the best resource for identifying the location of the cancer to be treated surgically, thereby reducing harm to the patient that may be caused by wrong-site surgery.

**Inverse Measure –** No

**Proportional Measure –** Yes

**Continuous Variable Measure –** No

**Ratio Measure -** No

**Indicate an Overall Performance Rate –** 1st Performance Rate

**Risk Adjusted Status –** No

**Range of the Score(s) if Continuous Variable and/Ratio – N/A**

**Number of Performance Rates to be Calculated and Submitted – 1**

**Performance Rate Description(s) – N/A**

**Clinical Recommendation Statement –** Clinical studies have demonstrated that locations for biopsy proven skin cancers may in some cases be difficult to find by observation alone at the time the patient presents for definitive treatment of the skin cancer. Photographs and anatomic diagrams of the biopsy site location performed at the time of biopsy or during the healing period have demonstrated better effectiveness in locating the actual site. Studies have also demonstrated a gap in the availability of these helpful aids for location accuracy. This measure aims to improve the availability of these tools to aid in skin cancer biopsy site location, thus reducing the likelihood of wrong-site surgery.

**Rationale for the QCDR Measure –** Wrong-site surgery is considered a sentinel event or "never event" that should be avoided.1-3 However, wrong-site surgery still occurs causing patient harm, is likely underreported, is a major reason for medical malpractice lawsuits, and is a practice gap within the field of dermatologic surgery and Mohs micrographic surgery.4-8 The true incidence of wrong-site dermatologic surgery is difficult to know as most studies have focused on operating room scenarios.1 Studies evaluating wrong site surgery incidence in the operatory have varied widely in the results ranging from 0.09 to 4.5 per 10,000 surgeries.21 Wrong site surgery procedures are the leading cause of serious errors in dermatologic surgery as noted in a dermatologist-reported survey and these have led to malpractice litigation.3,7,22

When patients present for Mohs surgery, one of the first preoperative tasks should be to confirm the correct surgical site.1, 9, 10 Due to multiple factors, such as field cancerization, significant sun damage, multiple surgical scars, healing time after biopsy and prior to surgery, delay in surgery, and multiple adjacent synchronous biopsy proven tumors requiring treatment, the true surgical site of interest is often difficult to find.11-15 Data also shows that patient identification of these sites alone is not sufficient, as patients may forget or misidentify the anatomic location of their biopsy site. In fact, patients will incorrectly identify the surgical site in 16-29% of cases, and up to one fifth of surgeons will misidentify the biopsy sites without photography.13, 15-18,22 The majority of surgeons feel that a photograph is the most useful tool for identifying the correct surgical site.9, 17 In a survey of Mohs surgeons, 89% indicated that a photograph is the most useful form of documentation. However, 88% reported not receiving photographs for more than 75% of their referrals indicating a significant performance gap for this issue.17 In another single-center prospective study evaluating 333 consecutive skin cancers undergoing Mohs micrographic surgery, only 5% of the referred cases with documentation included photographs and 23% of cases included high-quality diagrams.16

With the implementation of EHR and the differences in nomenclature of the same anatomic location (i.e. infraocular cheek, lower eyelid, upper cheek, malar cheek, lateral or medial malar cheek, zygoma, zygomatic arch) a photographic record and/or detailed anatomic map can help confirm the

correct biopsy site location for the cancer under consideration and reduce the potential for wrong-site surgery.1, 9-11, 13, 18-20 In the event that a photograph was not performed at the time of biopsy, there is evidence that utilizing a patient's digital mobile device can be accurate and effective in identifying the correct biopsy site location(s). 13,19,20

While Mohs surgeons do not have direct control over whether referring providers capture and forward a photograph or anatomic map of the biopsy site, they can act as a driver to increase the number of patients reporting for surgery who have one of these documentation methods to aid in proper treatment site identification. The goal is for referring providers to understand the importance of a photo and/or map to the patient referral process and prompt them to implement this practice into their workflow.

Given the aforementioned studies demonstrating benefits and a gap, implementation of this measure promotes obtaining and documenting the utilization of photographs and/or anatomic maps to provide the best resource for identifying the location of the cancer to be treated surgically, thereby reducing harm to the patient that may be caused by wrong-site surgery.

References:

1. Starling J, 3rd , Coldiron BM. Outcome of 6 years of protocol use for preventing wrong site office surgery. J Am Acad Dermatol 2011;65:807-10.

2. Hansen TJ, Lolis M, Goldberg DJ , MacFarlane DF. Patient safety in dermatologic surgery: Part I. Safety related to surgical procedures. J Am Acad Dermatol 2015;73:1-12; quiz 3-4.

3. Watson AJ, Redbord K, Taylor JS, Shippy A, Kostecki J , Swerlick R. Medical error in dermatology practice: development of a classification system to drive priority setting in patient safety efforts. J Am Acad Dermatol 2013;68:729-37.

4. Stahel PF, Sabel AL, Victoroff MS, Varnell J, Lembitz A, Boyle DJ et al. Wrong-site and wrong-patient procedures in the universal protocol era: analysis of a prospective database of physician self-reported occurrences. Arch Surg 2010;145:978-84.

5. Ke M, Moul D, Camouse M, Avram M, Carranza D, Soriano T et al. Where is it? The utility of biopsy-site photography. Dermatol Surg 2010;36:198-202.

6. Cao LY, Taylor JS , Vidimos A. Patient safety in dermatology: a review of the literature. Dermatol Online J 2010;16:3.

7. Perlis CS, Campbell RM, Perlis RH, Malik M , Dufresne RG, Jr. Incidence of and risk factors for medical malpractice lawsuits among Mohs surgeons. Dermatol Surg 2006;32:79-83.

8. Ibrahim SF. Practice gaps. Wrong-site surgery in dermatology. JAMA Dermatol 2014;150:558-9.

9. Alam M, Lee A, Ibrahimi OA, Kim N, Bordeaux J, Chen K et al. A multistep approach to improving biopsy site identification in dermatology: physician, staff, and patient roles based on a Delphi consensus. JAMA Dermatol 2014;150:550-8.

10. Ormerod E , Bray A. A Wrong-Site Surgery Protocol for Dermatological Surgery. Dermatol Surg 2019;45:1197-8.

11. Harker DB, Mollet T, Srivastava D , Nijhawan RI. The role of imaging in the prevention of wrong-site surgery in dermatology. Semin Cutan Med Surg 2016;35:9-12.

12. Schinstine M , Goldman GD. Risk of synchronous and metachronous second nonmelanoma skin cancer when referred for Mohs micrographic surgery. J Am Acad Dermatol 2001;44:497-9.

13. Nijhawan RI, Lee EH , Nehal KS. Biopsy site selfies--a quality improvement pilot study to assist with correct surgical site identification. Dermatol Surg 2015;41:499-504.

14. Zhang J, Rosen A, Orenstein L, Van Voorhees A, Miller CJ, Sobanko JF et al. Factors associated with biopsy site identification, postponement of surgery, and patient confidence in a dermatologic surgery practice. J Am Acad Dermatol 2016;74:1185-93.

15. St John J, Walker J, Goldberg D , Maloney ME. Avoiding Medical Errors in Cutaneous Site Identification: A Best Practices Review. Dermatol Surg 2016;42:477-84.

16. Rossy KM , Lawrence N. Difficulty with surgical site identification: what role does it play in dermatology? J Am Acad Dermatol 2012;67:257-61.

17. Nemeth SA , Lawrence N. Site identification challenges in dermatologic surgery: a physician survey. J Am Acad Dermatol 2012;67:262-8.

18. McGinness JL , Goldstein G. The value of preoperative biopsy-site photography for identifying cutaneous lesions. Dermatol Surg 2010;36:194-7.

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?**

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology

**Other specialties** – Cutaneous oncology

**Preferred measure published clinical category-** Cutaneous oncology

**QCDR Notes**-N/A

**Measure Title -** ASPS22 Coordination of care for anticoagulated patients undergoing reconstruction after skin cancer resection

**Measure Description-** Percentage of patients aged 18 and older on prescribed anticoagulation medication who underwent reconstruction after skin cancer resection (in any setting) and preoperative modification* to their anticoagulant(s) regimen, who had documentation of coordinated care** prior to their procedure.

**Denominator-** All patients aged 18 and older on prescribed anticoagulation medication who underwent reconstruction after skin cancer resection (in any setting) and preoperative modification* to their anticoagulant(s) regimen

*Modification is indicated by change, reduction, or discontinuation of the current anticoagulant medication(s); Age > 18 years AND CPT® for Encounter: 14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061, 14301, 14350, 15050, 15100,15120, 15200, 15220, 15240, 15260, 15570, 15572, 15574, 15576, 40525, 40527, 15730, 15731, 15733, 15740, 15760, 67971, 67973, 67974, 67975 AND ICD-10 Codes for most common skin cancers: C43-C44, D03-D04 AND

Modification* to the anticoagulant(s) regimen

**Numerator**- Patients who had documentation of coordinated care** prior to their procedure.
**Documentation of coordinated care = documentation of discussion with physician currently managing the anticoagulation therapy (such as a cardiologist or primary care physician)

**Denominator exceptions-** Patient reason exceptions such as patients who choose to stop therapy on their own or by other physician recommendation, or who do not have a current physician managing their medication

**Denominator exclusions-N/A**

**Numerator exclusions-** N/A

**National Quality Forum (NQF) number, if applicable-**NA

**High priority status-**Yes, Care Coordination

**Measure type-**Process

**National Quality Strategy (NQS) domain-**Communication and care coordination

**Meaningful measure area-**Medication Management

**Care setting(s) to include Telehealth, if applicable-**Ambulatory care clinician office/clinic

**Number of performance rates required for measures-**1

**Proportional, continuous variable, and/or ratio measure indicator-**Proportional

**Risk adjusted-**NA

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?** No

**Primary Data Source Used For Abstraction-** Other

**Describe data source**-EHR, Hybrid, Paper medical record

**Validity Testing Summary**-See measure owner's specifications

**Describe Link to Cost Measure/Improvement Activity-**no relevant cost measures;

IA_PSPA27 Invasive Procedure or Surgery Anticoagulation Medication Management

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-**
"Time Period: 1/1/2019 - 7/20/2021
Eligible Clinicians: 47
Performance Range: 100%
Performance Average: 54.88%"

**Please indicate applicable specialty/specialties-**Dermatology, Other

**Other specialties**-Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Surgical/procedural care-skin cancer

**QCDR Notes-** This numerator action can be completed by telehealth. However, we cannot include telehealth codes due to global billing. We have to tie this measure to the procedure because there is no coded visit for follow-up care. This is a huge frustration in surgical measure development.

**Measure Title -** ASPS24 Visits to ER or urgent care following reconstruction after skin cancer resection

**Measure Description-** Part 1: Percentage of patients aged 18 and older who underwent reconstruction after skin cancer resection who were asked* within 30 days of their procedure whether they visited the ER or Urgent Care within 7 days of their procedure, for a reason related to the reconstruction after skin cancer resection surgery.

Part 2: Percentage of patients, aged 18 and older who underwent reconstruction after skin cancer resection and were asked within 30 days of the procedure about visiting the ER, who visited the ER or Urgent Care within 7 days of their procedure for a reason related to the reconstruction after skin cancer resection surgery. (Only Part 2 is intended to be reported for accountability, but Part 1 must be completed)

**Denominator-** Part 1: All patients aged 18 and older who underwent reconstruction after skin cancer resection

Part 2: All patients aged 18 and older who underwent reconstruction after skin cancer resection and were asked within 30 days of the procedure about visiting the ER; Age > 18 years AND CPT® for Encounter: 14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061, 14301, 14350, 15050, 15100,15120, 15200, 15220, 15240, 15260, 15570, 15572, 15574, 15576, 15730, 15731, 15733, 15740, 15760, 40525, 40527, 67971, 67973, 67974, 67975 AND ICD-10 Codes for most common skin cancers: C43-C44, D03-D04, AND (for Part 2 only)

Patients who were contacted within 30 days of their procedure to determine whether they visited the ER or Urgent Care within 7 days of their procedure for a reason related to the reconstruction after skin cancer resection surgery

**Numerator-** Part 1: Patients who were asked* within 30 days of their procedure whether they visited the ER or Urgent Care within 7 days of their procedure for a reason related to the reconstruction after skin cancer resection surgery.

* Patients can be asked at a follow-up visit or by phone or HIPPA Secure Messaging.

Part 2: Patients who visited the ER or Urgent Care within 7 days of their procedure for a reason related to the reconstruction after skin cancer resection surgery

**Denominator exceptions**-None

**Denominator exclusions-** N/A

**Numerator exclusions-** N/A

**National Quality Forum (NQF) number, if applicable**-NA

**High priority status**-Yes

**High priority type**-Outcome

**Measure type-**Outcome

**National Quality Strategy (NQS) domain-**Efficiency and Cost Reduction

**Meaningful measure area-**Appropriate use of Healthcare

**Care setting-** Ambulatory Care Clinician Office/Clinic

**Include Telehealth?** No

**Number of performance rates required for measures-**1

**Proportional, continuous variable, and/or ratio measure indicator**-Proportional

**Risk adjusted**-NA

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc.?** No

**Primary Data Source Used For Abstraction**-Other

**Describe data source-** EHR, Hybrid, Paper medical record

**Validity Testing Summary-** See measure owner's specifications

**Describe Link to Cost Measure/Improvement Activity-** No link to Cost Measure

No link to Improvement Activity

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-**

"Time Period: 1/1/2019 - 7/20/2021

Eligible Clinicians: 81

Performance Range: 100%

Performance Average: 4.07%"

**Please indicate applicable specialty/specialties-** Dermatology, Other

**Other Specialties-** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-**Surgical/procedural care-skin cancer

**QCDR Notes-** This numerator action can be completed by telehealth. However, we cannot include telehealth codes due to global billing. We have to tie this measure to the procedure because there is no coded visit for follow-up care. This is a huge frustration in surgical measure development.

**Measure Title -** ASPS27 Avoidance of post-operative systemic antibiotics for office-based Closures and reconstruction after skin cancer Procedures

**Are you the primary steward-** No

**Indicate co-owners-** MOHSAIQ (American College of Mohs Surgery), DataDerm

**Measure Description-** Percentage of procedures in patients aged 18 and older with a diagnosis of skin cancer who underwent intermediate layer or complex linear closure or 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)

This measure is stratified by intermediate layer or complex linear closure or reconstructive procedures.

**Denominator-** All patients aged 18 and older with a diagnosis of skin cancer who underwent intermediate layer or complex linear closure or reconstruction after skin cancer resection in the office-based* setting

Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Strata 2: Reconstruction after skin cancer resection

Strata 3: Intermediate layer and complex linear closures AND reconstruction after skin cancer resection in the office-based setting (Weighted average of Strata 1 and 2)

*Office based: not billed with an ASC or inpatient facility code; Age > 18 years AND

Strata 1: CPT for Encounter Intermediate layer and complex linear closures

12031, 12032, 12034, 12035, 12036, 12037, 12041, 12042, 12044, 12045, 12046, 12047, 12051, 12052, 12053, 12054, 12055, 12056, 12057, 13100, 13101, , 13120, 13121, , 13131, 13132, , 13151, 13152 OR

Strata 2: CPT® for Encounter Reconstruction 14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061, 15050, 15100,15120, 15200, 15220, 15240, 15260, 15740 and ICD-10 Codes for most common skin cancers: C43-C44, D03-D04 and Place of Service Code: 11 (office)

Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2 + numerator 3)/(denominator 1 + denominator 2 + denominator 3), not the average of the performance rates

**Numerator-** Patients who were prescribed post-operative systemic antibiotics to be taken immediately following surgery (inverse measure)

**Denominator exclusions**- Surgical sites at intrinsically high risk of infection – lower extremities and intertriginous areas (groin, genitalia, perianal, axilla)

Surgical reconstructions at intrinsically higher risk of infection – flaps greater than 30 square cm, full thickness skin grafts greater than 20 square cm, multistage interpolation flaps, wedge reconstructions of ear, reconstructions requiring 2 or more repair types (flap and graft), cartilage or composite graft, or repair of exposed cartilage or bone

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 – C43.70, C43.71, C43.72; MMIS – D03.70, D03.71, D03.72;SCCIS – D04.70, D04.71, D04.72

Cartilage grafts: 21230, 21235, 20910, 20912

**Denominator exceptions-** Medical reason exceptions include patients with a history of:

1. Lymphedema I89.0, I89.1, I89.8, I89.9

2. History of immunosuppressive medications Z92.24

3. Immunodeficiency syndromes D82.0, D82.1, D82.2, D82.3, D82.4, D82.8, D82.9

4. HIV B20

5. Underlying disease with high risk of surgical site infection – chronic inflammatory skin disease (such as psoriasis and atopic dermatitis) or documented staph aureus carrier

6. Clinical evidence of infection at the surgical site at time of reconstruction, defined as:

- Purulent drainage, with or without laboratory confirmation, from the surgical site

- Pathogenic organisms isolated from culture of fluid or tissue from the surgical site

- At least one of the following signs or symptoms of infection at the surgical site: pain or tenderness, localized swelling, redness, or heat.

- An existing antibiotic prescription from another provider based on the diagnosis of infection at the surgical site.

- Underlying disease with high risk of surgical site infection – chronic inflammatory skin disease (such as psoriasis and atopic dermatitis) or documented staph aureus carrier status or patient history of 3 or more surgical site infections, presence of lymphedema, history of immunodeficiency or immunosuppression

**Numerator exclusions-** N/A

**Primary Data Source Used For Abstraction-**Other

**Describe other source-** EHR, Hybrid, Paper medical record

**National Quality Forum (NQF) number (optional)**-N/A

**High priority status-**Yes

**High Priority type-** Appropriate Use

**Measure type-**Process

**National Quality Strategy (NQS) domain-**Effective Clinical Care

**Care Setting-**Ambulatory care: clinician Office/Clinic

**Includes telehealth-** No

**Which Meaningful Measure Area applies to this measure?** Appropriate Use of Healthcare

**Meaningful Measure Area Rationale-** This measure is for not giving antibiotics after resection procedures in the office setting. It's actually an overuse measure, but as that doesn't seem to be a meaningful measures category, it seems to fall into appropriate use.

**ANALYTICS**

**Measure Calculation Type**- Inverse measure, proportional measure

**Number of performance rates to be calculated and submitted**-3

**Performance Rate Description (Optional)-** Rate 1: Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Rate 2: Strata 2: Reconstruction after skin cancer resection

Rate 3: Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2 )/(denominator 1 + denominator 2), not the average of the performance rates

**Indicate an Overall Performance-** 3rd performance rate

**Risk adjusted**-No

**Is the QCDR Measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc.?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity Testing Summary-** See measure owner's specifications.

**Feasibility Testing summary (Optional)**

**Reliability Testing Summary (Optional)**

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** No Cost link

No Improvement Activity link

**Clinical recommendation statement-** 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

**Rationale for the QCDR Measure-** 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.

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-**

"Time Period: Last 7 Months

Eligible Clinicians: Strata A = 127, Strata B = 127, Strata C = 127

Performance Range: Strata A = 95.52%, Strata B = 100%, Strata C = 95.52%

Performance Average: Strata A = 12.76%, Strata B = 15.52%, Strata C = 12.76%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** No

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional) -** 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.

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties:** Dermatology, other

**Other specialties-** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Surgical/Procedural Care- Skin Cancer

**QCDR Notes (optional)-** This measure has been harmonized proactively with DataDerm and MOHSAIQ. Although it has not yet been implemented with the new specifications, the original measure was abstractable, so there is no reason to believe this one would not be.

**Measure Title -** ASPS28 Continuation of Anticoagulation Therapy in the Office-based Setting for Closure and Reconstruction after Skin Cancer Resection Procedures

**Are you the primary steward(s)-** No

**Indicate co-owner(s)-** MOHSAIQ (American College of Mohs Surgery), DataDerm

**Measure Description-**Percentage of procedures in patients, aged 18 and older with a diagnosis of skin cancer, on prescribed anticoagulation therapy, who had intermediate layer and/or complex linear closures OR reconstruction after skin cancer resection performed in the office-based setting where anticoagulant therapy was continued prior to surgery. This measure is stratified by intermediate layer or complex linear closures AND reconstructive procedures.

**Denominator-**All procedures in patients aged 18 and older with a diagnosis of skin cancer, on prescribed anticoagulation therapy, who underwent:

Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Strata 2: Reconstruction after skin cancer resection

Strata 3: Intermediate layer and complex linear closures AND reconstruction after skin cancer resection in the office-based setting (Weighted average of Strata 1 AND 2)

Age > 18 years AND On prescribed anticoagulant therapy to include aspirin (ASA), clopidogrel, dipyridamole, prasugrel, ticagrelor, ticlopidine, warfarin, dabigatran, rivaroxaban, apixaban, edoxaban, bertrixaban AND

Strata 1: CPT for Encounter Intermediate layer and complex linear closures 12031, 12032, 12034, 12035, 12036, 12037, 12041, 12042, 12044, 12045, 12046, 12047, 12051, 12052, 12053, 12054, 12055, 12056, 12057, 13100, 13101, , 13120, 13121, 13131, 13132, , 13150, 13151, 13152, OR

Strata 2: CPT® for Encounter Reconstruction 14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061, 15050, 15100,15120, 15200, 15220, 15240, 15260, 15570, 15572, 15574, 15576, 15740, 40525, 40527 and ICD-10 Codes for most common skin cancers: C43-C44, D03-D04 and Place of Service Code: 11 (office)

Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2 )/(denominator 1 + denominator 2), not the average of the performance rates

**Numerator**-Patients for whom anticoagulant therapy was continued prior to surgery

**Denominator exclusions-**N/A

**Denominator exceptions**- Medical reason exceptions such as consultation with managing physician which resulted in medication modification; Patients who are taking aspirin (ASA) without a prescriber's recommendation / prescription; Patient taking warfarin, with a supratherapeutic INR

**Numerator exclusions-**N/A

**Primary Data Source Used For Abstraction-**Other

**Describe data source-** EHR, Hybrid, Paper medical record, administrative claims

**National Quality Forum (NQF) number, if applicable-** NA

**High priority status-**Yes

**High priority type-** Patient safety

**Measure type**-Process

**National Quality Strategy (NQS) domain-**Patient Safety

**Care setting(s**-Ambulatory Care Clinician Office/clinic

**Includes telehealth?** No

**Which Meaningful Measure Area applies to this measure?-**Preventable healthcare Harm

**Meaningful Measure Area Rationale-** This measure asks that surgeons continue (and not bridge or stop) anticoagulant medications for procedures done in the office setting (i.e. generally smaller, less invasive procedures). This reduces the risk of stroke from stopping the anticoagulant therapy.

**ANALYTICS**

**Measure Calculation Type-**Proportional measure

**Number of performance rates to be calculated and submitted-**3

**Performance Rate Description (Optional)-** Rate 1: Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Rate 2: Strata 2: Reconstruction after skin cancer resection

Rate 3: Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2 )/(denominator 1 + denominator 2), not the average of the performance rates

**Indicate an Overall Performance Rate-** 3rd performance rate

**Risk adjusted-**N/A

**Is the QCDR Measure able to be abstracted?-** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?-** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?-** No

**Validity Testing Summary-** See measure owner's specifications.

**Feasibility Testing Summary (Optional)**

**Reliability Testing Summary (Optional)**

**SUPPOTRING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** No link to cost

Improvement Activity link: IA_PSPA27 Invasive Procedure or Surgery Anticoagulation Medication Management

**Clinical Recommendation Statement-** 4a. The Work Group recommends that clinicians should continue anticoagulant, antithrombotic, and antiplatelet medications 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

**Rationale for QCDR Measure-** Pragmatic case series and cohort studies that have detected a higher rate of bleeding in reconstructions associated with anticoagulant use recommend continuing such medications perioperatively as the same studies have noted that cases of increased bleeding did not result in serious consequences for patients (Bordeaux JS 2011; Cook-Norris RH 2011; Otley CC 1996; Billingsley EM 1997). On the other hand, there are numerous case reports of medication cessation being associated with death as well as serious adverse events (Khalifeh MR 2006; Alam M 2002; Schanbacher CF 2000; Kovich O 2003) including strokes, cerebral emboli, myocardial infarctions, transient ischemic attacks, deep venous thromboses, pulmonary emboli, and retinal artery occlusion leading to blindness.

Potential benefits of continuing anticoagulant, antithrombotic, and antiplatelet medications include, most importantly, reduced risk of any thromboembolic event, and reduction in mortality. From a patient standpoint, not stopping medications may improve compliance, decrease patient confusion, and reduce the risk that medications will inadvertently be managed improperly. Potential risks of continuing medications perioperatively are milder, including slightly increased risk of bleeding, which may require bandage change, or further measures to secure the reconstruction with additional sutures or pressure dressings. Concurrent concerns may be a minor elevation in the risk of graft or flap loss, possible delay in wound healing, increased duration of the procedure, patient inconvenience relating to returning to the physician for a bleeding-associated complication, and the direct and indirect medical costs of additional medications, office visits, or procedures that may be required. Conceivably, surgeons concerned about a bleeding-associated complication may choose a less aesthetically or functionally optimal repair to minimize the risk. Importantly, the risks, harms, and costs of continuing oral anticoagulant, antithrombotic and antiplatelet medications can be collectively characterized as minor inconveniences and costs, while the potential benefits are reduction in the incidence of severe adverse events and death.

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-** "Time Period: Last 7 Months
Eligible Clinicians: Strata A = 127, Strata B = 127, Strata C = 127
Performance Range: Strata A = 94.83%, Strata B = 92.22%, Strata C = 94.83%
Performance Average: Strata A = 89.23%, Strata B = 89.12%, Strata C = 89.23%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)**

**Can the measure be benchmarked against the previous performance period data?** No

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)**

**If applicable, provide the study citation to support performance gap for the measure (Optional**)- A 2007 paper reported on a 2005 survey (Kirkorian et al 2007) of derm-surgeons and found that 37% discontinue medically necessary aspirin and 44% discontinue warfarin at least some of the time. Although clopidogrel was not surveyed, 78 physicians included comments about the management of this agent. The group is in the process of repeating the survey and should have new data for us soon. Data still are not published.

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)**

**Please indicate applicable specialty/specialties**: Dermatology, Other

**Other specialties-** Otolaryngology,  Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Surgical/Procedural Care- Skin Cancer

**QCDR Notes (Optional)-** This measure has been harmonized per CMS recommendation with MOHSAIQ and proactively with DataDerm. Although it has not yet been implemented with the new specifications, the original version and the MOHSAIQ version were both abstractable, so there is no reason to believe this one would not be.

**Measure Title -** ASPS29 Avoidance of Opioid Prescriptions for Closure and Reconstruction After Skin Cancer Resection

**Are you the primary steward:** No

**Indicate Co-Owners:** MohsAIQ (ACMS), DataDerm

**Measure Description-** Percentage of procedures in patients, aged 18 and older with a diagnosis of skin cancer, who had intermediate layer and/or complex linear closures OR reconstruction after skin cancer resection where opioid/narcotic therapy* was prescribed as first line therapy (as defined by a prescription in anticipation of or at time of surgery) for post-operative pain management by the reconstructing surgeon. (Inverse measure)

**Description of the denominator-** All procedures in patients aged 18 and older with a diagnosis of skin cancer where intermediate layer and/or complex linear closures OR reconstruction after skin cancer resection were performed

Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Strata 2: Reconstruction after skin cancer resection

Strata 3: Intermediate layer and complex linear closures AND reconstruction after skin cancer resection in the office-based setting (Weighted average of Strata 1 AND 2); Age > 18 years AND

Strata 1: CPT for Encounter Intermediate layer and complex linear closures; 12031, 12032, 12034, 12035, 12036, 12037, 12041, 12042, 12044, 12045, 12046, 12047, 12051, 12052, 12053, 12054, 12055, 12056, 12057, 13100, 13101, , 13120, 13121, , 13131, 13132, , 13150, 151, 13152 OR

Strata 2: CPT® for Encounter Reconstruction; 14000, 14001, 14020, 14021, 14040, 14041, 14060, 14061, 15100,15120, 15200, 15220, 15240, 15260, 15570, 15572, 15574, 15576, 15730, 15740, 67971, 67973, 67974, 67975 and ICD-10 Codes for most common skin cancers: C43-C44, D03-D04

Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2)/(denominator 1 + denominator 2), not the average of the performance rates

**Description of the numerator**- Patients who were prescribed opioid/narcotic therapy* as first line treatment (as defined by a prescription in anticipation of or at time of surgery) for post-operative pain management by the reconstructing surgeon. (Inverse measure)

*List of narcotic/opioid medications included: morphine, oxycodone, fentanyl, oxymorphone, hydromorphone, buprenorphine, meperidine, codeine, butorphanol, tramadol, levorphanol, sufentanil, pentazocine, tapentadol, hydrocodone

**Denominator exclusions-** 1.Location exclusion due to high tension closure and anticipated exceptional postsurgical pain (lower extremity, scalp, ear, genitals, perineum, lip, and nail unit)

2. Surgical procedures associated with anticipated exceptional post-surgical pain

a. flaps greater than 30 square cm*

b. split thickness skin grafts greater than 10 square cm*

c. paramedian forehead flap*

d. composite graft*

*These exclusions apply only to Strata 2 (reconstruction)

**Descriptions of the denominator exceptions-** 1. Medical reason exception for patients who cannot take non-opioid pain medications (patients with chronic kidney disease, COPD, allergy to non-steroidal anti-inflammatory medications and acetaminophen or documented contraindication to non-steroidal anti-inflammatory medications and acetaminophen, cirrhosis/liver disease)

2. Number of surgical sites – greater than 3 skin cancer sites treated or reconstructed in one day of service)

**Numerator exclusions-**None

**Primary data source for abstraction-**other

**Describe data source-**EHR, Hybrid, paper medical record

**National Quality Forum (NQF) number (Optional):** NA

**High priority measure-**Yes

**High priority type-**Opioid-related

**Measure type-**Process

**National Quality Strategy (NQS) domain**-Patient safety

**Care setting-**Ambulatory care: Hospital

**Includes Telehealth?** No

**Which Meaningful measure area applies to this measure?** Prevention and treatment of opioid and substance use disorders

**Care setting(s) to include Telehealth, if applicable**-Ambulatory care hospital

**Meaningful measure area rationale-** This measure discourages the use of opioids as first line therapy for pain management, which should help prevent the development of an opioid use disorder

**ANALYTICS**

**Measure calculation type-**Inverse measure, proportional measure

**Number of performance rates to be calculated and submitted-**3

**Performance rate description (optional)-**

Rate 1: Strata 1: Intermediate layer or complex linear closures after skin cancer resection

Rate 2: Strata 2: Reconstruction after skin cancer resection

Rate 3: Strata 3: FOR REPORTING

Strata 1 + Strata 2; Calculate as (numerator 1 + numerator 2)/(denominator 1 + denominator 2), not the average of the performance rates

**Indicate overall performance rate-** 3rd performance rate

**Risk adjusted status-** No

**Is the QCDR measure able to be abstracted?** Yes

**Disclosure: Does this measure require the use of proprietary software, devices, etc?** No

**TESTING**

**Was the QCDR measure tested at the individual clinician level?** No

**Validity testing summary-** See measure owner specifications

**Feasibility Testing Summary (Optional)-** NA

**Reliability Testing Summary (Optional)-**NA

**SUPPORTING DOCUMENTATION**

**Describe Link to Cost Measure/Improvement Activity-** NA

**Clinical recommendation statement-** 5a. The Work Group recommends that clinicians should not routinely prescribe narcotic medication as first line treatment for pain in adult patients undergoing reconstruction after skin cancer resection.

Evidence Quality: Moderate

Recommendation Strength: Moderate

5b. The Work Group recommends that clinicians should prescribe acetaminophen and nonsteroidal anti-inflammatory drugs (NSAIDs) as first line therapy in adult patients undergoing reconstruction for skin cancer resection.

Evidence Quality: Moderate

Recommendation Strength: Moderate

**Rationale for the QCDR measure-** There is increasing evidence that prescription narcotics, which surgical patients are 4 times as likely to receive upon discharge than non-surgical patients, are associated with increased risk of opioid diversion, addiction, unintentional injury, and death (Brat GA 2018). Patients who fill narcotic prescriptions after minor surgical procedures are more likely to exhibit persistent opioid use (Harbaugh CM 2018), and the duration of the prescribed use is a predictor of future misuse (Harris K 2014).

In the realm of reconstruction after skin cancer removal, a randomized clinical trial comparing oral postoperative pain management regimens has not shown narcotics to be more effective (Sniezek PJ 2018). Specifically, patients undergoing reconstruction of head and neck wounds were assigned to receive every 4 hours after surgery (up to 4 doses) one of the following: 1000 mg of acetaminophen, 1000 mg of acetaminophen plus 400 mg of ibuprofen, or 325 mg of acetaminophen plus 30 mg of codeine. Pain was assessed by patient self-report using a visual analog scale immediately after surgery, and at 2, 4, 8, and 12 hours postoperatively. Subgroups were compared based on the area of the reconstructed defect. At 2 and at 4 hours the acetaminophen plus codeine group reported more pain than the acetaminophen plus ibuprofen group. At other time points, no difference was seen in mean change in pain scores across the groups. At no time points was the regimen including the narcotic agent found to control pain better than either of the other two non-narcotic regimens. Overall patient satisfaction, measured at the end of the study, did not differ between the codeine group and either of the other two groups (Sniezek PJ 2018).

Retrospective and prospective case series (Parsa FD 2017; Kelley BP 2016) that compared narcotic and non-narcotic post-operative pain strategies found no difference in surgical outcomes.

This measure is specifically focused on not prescribing opioids and narcotics as first line treatment. Although it does not address other forms of pain management, the guideline on which the measure is based does. That recommendation is cited above. There is also flexibility to add a narcotic medication for breakthrough pain should the need arise.

**Provide measure performance data (# months data collected, average performance rate, performance range, and number of clinicians or groups)-** "Time Period: Last 7 Months
Eligible Clinicians: Strata A = 127, Strata B = 127, Strata C = 127
Performance Range: Strata A = 60.19%, Strata B = 64.35%, Strata C = 60.19%
Performance Average: Strata A = 2.96%, Strata B = 3.53%, Strata C = 2.96%"

**If existing measure with changes, please indicate what has changed to the existing measure. (Optional)-** NA

**Can the measure be benchmarked against the previous performance period data?** No

**If applicable, please provide details why the previous benchmark can or cannot be used. (Optional)-**

**If applicable, provide the study citation to support performance gap for the measure (Optional)-**

I All Mohs micrographic patients in a study by Limthongkul, Samie et al 2013 were given an opioid prescription to fill as needed, and more patients (16% vs 7.1%) used opioids for pain relief than in similar studies where the prescription was not given ahead of time.

Another study comparing full-thickness skin grafts with second-intention wound healing for defects of the helix found the mean pain scores to be similar for both (2.8 and 2.5 of 10, respectively) (Hochwalt, Christensen et al 2015).

Thirty-five percent of the patients in Harris et al 2104 received a postoperative opioid prescription, with a total of 851 opioid pills prescribed for 82 patients.

In a survey of ASDS members regarding opioids prescribing, 36% reported prescribing opioids in > 10% of their cases, with 7% prescribing in more than 75% of cases. 59% reported prescribing >10 pills and 31% reported prescribing >15 pills after surgery (Harris et al 2014).

**If applicable, provide a Participation Plan if QCDR measure has low adoption by clinicians (Optional)-**NA

**Please indicate applicable specialty/specialties:** Dermatology, Other

**Other specialties:** Otolaryngology, Plastic and Reconstructive Surgery

**Preferred measure published clinical category-** Surgical/Procedural Care- Skin Cancer

**QCDR Notes (optional)-** This measure has been harmonized per CMS recommendation with MOHSAIQ and proactively with DataDerm. Although it has not yet been implemented with the new specifications, the original version and the MOHSAIQ version were both abstractable, so there is no reason to believe this one would not be.