American Academy of Allergy Asthma & Immunology

Penicillin Allergy: Appropriate Removal or Confirmation – National Quality Strategy Domain: Communication and Care Coordination

DESCRIPTION:
Percentage of patients, regardless of age, with a primary diagnosis of penicillin or ampicillin/amoxicillin allergy, who underwent elective skin testing or antibiotic challenge that resulted in the removal of the penicillin or ampicillin/amoxicillin allergy label from the medical record if negative or confirmation of the penicillin or ampicillin/amoxicillin allergy label if positive.

INSTRUCTIONS:
This outcomes measure is to be reported **once per reporting period** for all patients with a penicillin or ampicillin/amoxicillin allergy label in the medical record who are seen during the reporting period. Patients with a history of penicillin allergy without preceding skin testing, in vitro testing or antibiotic challenge will qualify for the measure denominator. For the purposes of this measure, a "penicillin allergy" will only include natural penicillins or aminopenicillins, ampicillin and amoxicillin. A discussion regarding the risks and benefits of elective skin testing or penicillin challenge should take place with the patient or their caregiver/guardian. If the patient has previously declined skin testing or antibiotic challenge, they can be exempt from the measure numerator. In order to meet the numerator of this measure, skin testing or antibiotic challenge results should be reviewed and documented in the medical record. Further, the penicillin allergy label should be removed if results are negative or confirmed if positive. This measure may be reported by clinicians who perform the quality actions described in the measure based on the services provided and the measure-specific coding.

Measure Reporting via Registry:
ICD-10-CM diagnosis codes, CPT codes, patient demographics, and medical record data are used to identify patients who are included in the measure's denominator. Medical record data and the listed numerator options are used to report the numerator of the measure.

DENOMINATOR:
All patients, regardless of age, with a diagnosis of primary penicillin or ampicillin/amoxicillin allergy seen during the reporting period

Definition:
Penicillin Allergy – For the purposes of this measure, a "penicillin allergy" will only include a history of allergy to natural penicillins (penicillin G and penicillin V) OR aminopenicillins (ampicillin and amoxicillin).

Denominator Criteria (Eligible Cases):
All patients regardless of age
AND
Adverse effect of penicillins (ICD-10-CM): T36.0X5A, T36.0X5D, T36.0X5S
Allergy status to penicillin (ICD-10-CM): Z88.0
AND
Patient encounter during the reporting period: 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99241, 99242, 99243, 99244, 99245
AND NOT
Diagnosis for Steven-Johnson Syndrome (ICD-10): L51.1
Diagnosis for Serum-Sickness (ICD-10): T80.61XA, T80.61XD, T80.61XS

NUMERATOR:
Patients who underwent elective skin testing or penicillin challenge AND who had the penicillin or ampicillin/amoxicillin allergy label removed from the medical record if results were negative or confirmed in the medical record if results were positive.

NUMERATOR NOTE: A positive result consists of either a positive skin test or positive challenge after a negative skin test.

Numerator Options

Performance Met: Patient underwent elective skin testing or penicillin challenge AND had the penicillin or ampicillin/amoxicillin allergy label removed from the medical record if results were negative or confirmed in the medical record if results were positive

OR

Medical Performance Exclusion: Medical reason(s) for not documenting and reviewing (eg, previous positive penicillin skin test, patients with severe anaphylaxis to penicillin within the past 5 years, patients with penicillin reaction histories consistent with severe non-IgE-mediated reactions, significant comorbid disease and patients unable to discontinue medications with antihistaminic effects or beta-blockers)

OR

Patient Performance Exclusion: Patient reason(s) for not documenting and reviewing results (eg, patients who decline or are non-adherent with skin testing/challenge recommendations)

OR

Performance Not Met: Patient did **NOT** undergo elective skin testing/penicillin challenge and did not have the penicillin or ampicillin/amoxicillin allergy label removed or confirmed on the medical record, reason not otherwise specified

RATIONALE:
Most patients with a diagnosis of penicillin allergy are not allergic to penicillin. The avoidance of penicillin and related beta-lactam antibiotics may result in use of antibiotics that are less effective, more costly or more toxic. Additionally, rapid penicillin desensitization may be pursued unnecessarily, which also results in higher costs.

In regards to exclusions, testing for penicillin requires the ability to test without concomitant use of a medicine with antihistaminic effects. Severe non-IgE-mediated penicillin reactions cannot be diagnosed via penicillin skin testing. Patients with significant comorbid diseases may be at higher risk of reaction due to skin testing and challenge. Also, should the patient be on a beta-blocker and unable to withhold before challenge this could be exclusion.

CLINICAL RECOMMENDATION STATEMENTS:
The following evidence statements are quoted verbatim from the referenced clinical guidelines:

Summary Statement 54: The most useful test for detecting IgE-mediated drug reactions caused by penicillin and many large-molecular-weight biologicals is immediate hypersensitivity skin testing. (B)

Summary Statement 71: Approximately 10% of patients report a history of penicillin allergy, but after complete evaluation, up to 90% of these individuals are able to tolerate penicillins. (B)

Summary Statement 72: Treatment of patients assumed to be penicillin allergic with alternate broad-spectrum antibiotics may compromise optimal medical care by leading to multiple drug-resistant organisms, higher costs, and increased toxic effects. (C)

Summary Statement 73: Evaluation of patients with penicillin allergy by skin testing leads to reduction in the use of broad-spectrum antibiotics and may decrease costs. (B)

Joint Task Force on Practice Parameters; American Academy of Allergy, Asthma and Immunology; American College of Allergy, Asthma and Immunology; Joint Council of Allergy, Asthma and Immunology: Drug allergy: an updated practice parameter. Ann Allergy Asthma Immunol 2010,105:259–273.

The Penicillin Allergy: Appropriate Removal or Confirmation measure was developed by the American Academy of Allergy Asthma & Immunology (AAAAI). The measure is not a clinical guideline, does not establish a standard of medical care, and has not been tested for all potential applications. The CPT® contained in the measure specification is copyright 2004-2014 American Medical Association.

Measure Type: Outcome