
Final Report on Blood Based Allergy Testing for Asthma

**As Required By S.B. 1542, 83rd Legislature,
Regular Session, 2013**

**Health and Human Services Commission
February 2014**

Table of Contents

Executive Summary1
Introduction.....2
 Legislation.....2
 Background.....3
 Epidemiology of Allergy-induced Asthma and Impact3
 Texas: Related State and Local Quality Improvement Initiatives6
Policy Options for Texas9
 Description of the Medicaid Service Delivery System.....9
 Summary of Potential Options and Considerations10
 Estimations of Quality and Fiscal Impacts, and Statutory Barriers11
 Number of Medicaid Recipients Impacted and Potential Cost Savings11
 Statutory Barriers11
Conclusion11
Endnotes.....12
References.....13

Executive Summary

S.B. 1542, 83rd Legislature, Regular Session, 2013 mandates the Texas Health and Human Services Commission (HHSC) to develop and implement a quality improvement process to receive and evaluate selected suggestions for clinical initiatives designed to improve the quality of care and the cost-effectiveness of the Medicaid program. Part of this legislation requires HHSC to conduct a full analysis and submit a final report for a clinical initiative related to authorizing the Medicaid program to provide blood-based allergy testing for patients with persistent asthma to develop an appropriate treatment strategy that would minimize exposure to allergy-induced asthma attacks.

Allergy blood tests detect and measure the amount of allergen-specific antibodies in blood. These tests can identify persons with antibodies to dust, pet dander, trees/pollen, molds, and some foods. Sometimes, asthma may be caused by an allergic response rather than some other event. In those cases, treatment of the allergy may be more effective than just treating the resulting asthma.

Currently, these specific tests are a benefit in the Medicaid program. Because these are already part of the current Medicaid benefits, HHSC could explore the various options listed in Table 3 on page 10.

Introduction

Legislation

S.B. 1542, 83rd Legislature, Regular Session, 2013 required HHSC to conduct a full analysis of a clinical initiative proposal to provide blood-based allergy testing for patients with persistent asthma in order to develop an appropriate treatment strategy that would minimize exposure to allergy-induced asthma attacks.

Related sections of the bill to this clinical initiative are summarized below.

Section 1

Section 538.0521 Required Clinical Initiatives. (a) In addition to the clinical initiatives selected for analysis under Section 538.054, the commission shall conduct an analysis and issue a final report in accordance with the requirements of this chapter for the following: ... (2) an initiative that would authorize the Medicaid program to provide blood-based allergy testing for patients with persistent asthma to develop an appropriate treatment strategy that would minimize exposure to allergy-induced asthma attacks (b) This section expires August 31, 2014.

Section 538.054 Analysis of Clinical Initiatives. The analysis required under this section must include a review of:

- (1) any public comments and submitted research relating to the initiative;
- (2) the available clinical research and historical utilization information relating to the initiative;
- (3) published medical literature relating to the initiative;
- (4) any adoption of the initiative by medical societies or other clinical groups;
- (5) whether the initiative has been implemented under:
 - (A) the Medicare program;
 - (B) another state medical assistance program; or
 - (C) a state-operated health care program, including the child health plan program;
- (6) the results of reports, research, pilot programs, or clinical studies relating to the initiative conducted by:
 - (A) institutions of higher education, including related medical schools;
 - (B) governmental entities and agencies; and
 - (C) private and nonprofit think tanks and research groups;
- (7) the impact that the initiative would have on the Medicaid program if implemented in this state, including:
 - (A) an estimate of the number of recipients under the Medicaid program that would be impacted by implementation of the initiative; and
 - (B) a description of any potential cost savings to the state that would result from implementation of the initiative; and
- (8) any statutory barriers to implementation of the initiative.

Section 538.055 Final Report on Clinical Initiative. The final report based on the commission's analysis of a clinical initiative under Section 538.054 must include:

- (1) a final determination of:
 - (A) the feasibility of implementing the initiative;
 - (B) the likely impact implementing the initiative would have on the quality of care provided under the Medicaid program; and
 - (C) the anticipated cost savings to the state that would result from implementing the initiative;
- (2) a summary of the public comments, including a description of any opposition to the initiative;
- (3) an identification of any statutory barriers to implementation of the initiative; and
- (4) if the initiative is not implemented, an explanation of the decision not to implement the initiative.

Section 538.057 Action on Clinical Initiative by Commission. After the commission conducts an analysis of a clinical initiative under Section 538.054:

- (1) if the commission has determined that the initiative is cost-effective and will improve the quality of care under the Medicaid program, the commission may:
 - (A) implement the initiative if implementation of the initiative is not otherwise prohibited by law; or
 - (B) if implementation requires a change in law, submit a copy of the final report together with recommendations relating to the initiative's implementation to the standing committees of the senate and house of representatives having jurisdiction over the Medicaid program; and
- (2) if the commission has determined that the initiative is not cost-effective or will not improve quality of care under the Medicaid program, the commission may not implement the initiative.

Section 2

Not later than January 1, 2014, the Health and Human Services Commission shall conduct an analysis and submit a final report on the clinical initiatives required under Section 538.0521, Government Code, as added by this Act.

Background

The Legislature required HHSC to determine the feasibility and potential cost-effectiveness of adding blood-based allergy testing as a benefit for Medicaid beneficiaries with persistent asthma, to develop an appropriate treatment strategy that would minimize exposure to allergy-induced asthma attacks.

Epidemiology of Allergy-induced Asthma and Impact

The triggers for asthma vary from person to person, but common triggers include cold air; exercise; allergens (things that cause allergies) such as dust mites, mold, pollen, animal dander or cockroach debris, food; air pollutants such as smoke; and some types of viral infections. According to the American Academy of Allergy Asthma and

immunology, eight foods are responsible for the majority of food-based allergic reactions: cow's milk, eggs, fish, peanuts, shellfish, soy, tree nuts and wheat. In a 2009-2010 study of 38,480 children (infant to 18)¹, researchers determined that eight percent have a food allergy, although it is not known how many of them have allergy-induced asthma.

- Approximately 6 percent aged 0-2 years have a food allergy
- About 9 percent aged 3-5 years have a food allergy
- Nearly 8 percent aged 6-10 years have a food allergy
- Approximately 8 percent aged 11-13 years have a food allergy
- More than 8.5 percent aged 14-18 years have a food allergy

Food allergic patients with asthma have a higher risk of developing life-threatening food-induced reactions. Although food allergy is not typically an etiology of asthma, an asthmatic patient with food allergy may have higher rates of morbidity and mortality associated with the asthma. Asthma is rarely a manifestation of food allergy alone, but the symptoms can be seen with allergic reactions to foods.²

While blood based tests for food allergy induced asthma may be used in developing a diagnosis, a food challenge under the care of an allergist/immunologist may be needed to confirm the response was from an allergy as opposed to food intolerance.

Guidelines on Asthma

The Expert Panel Report 3 (EPR 3) Guidelines on Asthma was developed by an expert panel commissioned by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee (CC), coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health. Guidelines on Asthma were developed by an expert panel commissioned by the National Asthma Education and Prevention Program (NAEPP) Coordinating Committee (CC), coordinated by the National Heart, Lung, and Blood Institute (NHLBI) of the National Institutes of Health³.

The EPR 3 guidelines are referenced by both The American Academy of Allergy, Asthma and Immunology and the American Academy of Family Physicians. The guidelines, revised in 2010, cited studies that showed the association between allergy to certain indoor allergens and asthma and provides rationale for allergy testing for perennial indoor allergens. They recommend that allergen immunotherapy (desensitization) be considered for patients who require daily asthma medications, such as those with persistent asthma, if they are found to have such allergies.

It is possible to identify the perennial indoor allergens through use of skin or blood testing for serum assay for specific immunoglobulin E (IgE) antibodies. These types of blood tests are called RAST (radioallergosorbent test) and MAST (multiple allergosorbent test). RAST testing uses a radioimmunoassay of the blood serum used to detect specific allergens. MAST is a RAST-type test using an enzyme rather than a radioactive marker. These tests are billed by healthcare providers using the following

national current procedural terminology (CPT) codes created by the American Medical Association:

86003 Allergen specific IgE; quantitative or semi quantitative, each allergen. This can be done through the RAST (Radioallergosorbent Tests), ELISA (Enzyme-linked Immunosorbent Assay) or FAST (Fluorescent Allergosorbent Test) methodology.

86005 Allergen specific IgE; qualitative, multiallergen screen (dipstick, paddle, or disk). This is a MAST test (Multiple Radioallergosorbent Test).

While some commercial carriers limit these tests to a short list of allergy-related diagnoses such as listed below, both CPT codes listed above are currently payable benefits for Texas Medicaid recipients without diagnosis restrictions.

Table 1

<u>CPT Code</u>	<u>Diagnosis</u>
516.8	Allergic bronchopulmonary aspergillosis
693.1	Food allergy
989.5	Stinging insects (hymenoptera venom allergy)
477.0 - 477.9	Inhalant allergy
995.27	Drug Allergy

Medicaid Utilization Data

Texas Medicaid does not have a count of members whose asthma is food allergy-induced, nor any way to determine the cost of care for those individuals since there is no diagnosis code that conveys whether the asthma is extrinsic (triggered by an allergy) or intrinsic (predisposed to), and from a food-based allergy. For many individuals, there may be a genetic predisposition. It can be determined how many Medicaid clients had a blood-based allergy test and had a diagnosis of allergy.

In an informal query of claims and encounters for dates of service between July 1, 2012 and June 30, 2013, run on September 9, 2013, few claims for RAST or MAST tests included an asthma diagnosis as the primary diagnosis. Claims data does not include the results of those tests.

Table 2

	<u>Code 86003</u>	<u>Code 86005</u>
All claims/encounters	196,029	1,314
Those with an asthma diagnosis (493.00-493.92)	12,048	36

While RAST and MAST tests seem to be the focus of the legislative language, there is another form of blood-based testing that looks at blood eosinophil counts as they relate to an asthma phenotype characterized by predominance of eosinophils in the bronchial airways and corticosteroid responsiveness. This form of asthma results in airway inflammation and may be genetically based.

This test is billed using Healthcare Common Procedure Coding System (HCPCS) code S3630 Eosinophil count, blood, direct. This is not a benefit for Medicare or Texas Medicaid. However, testing for eosinophils is included as part of a complete blood count (CBC) test, and is a benefit of Texas Medicaid.

Public Comment

Public comment was received from ImmunoDiagnostics /Thermo Fisher Scientific in support of testing to diagnose allergy induced asthma. Staff met with Karen Reagan from Texas Star Alliance who was instrumental in adding this initiative for consideration. We provided her with information about the current benefit and answered all other questions she had.

Texas: Related State and Local Quality Improvement Initiatives

Delivery System Reform Incentive Payment (DSRIP) Projects

As a result of the 1115 Medicaid Transformation Waiver, there are a number of Delivery System Reform Incentive Payment (DSRIP) projects throughout the state that have asthma as a focus.

While there are more than one thousand 1115 waiver projects, some do have asthma as a focus. One has an allergy /asthma focus.

- Teach self-management skills/patient education (2 projects)
- Intensive case management (2 projects)
- Develop disease registry (2 projects)
- Care coordination (3 projects, includes Wagner Chronic Care Model)
- Increased access to care (2 projects)
- School based approach to management (1 project)
- Home based patient navigator approach to management (1 project)

Medicaid Reimbursement Adjustments and Quality Improvement Strategies Based on Potentially Preventable Events (PPE)

Although the HHSC initiatives related to potentially preventable events (PPE) do not focus specifically on the cause of asthma, they do have relevance as these PPEs are based

on diagnosis related groupings and use incentives/disincentives based on risk-adjusted rates of PPE to promote improved quality.

HHSC has begun to focus on potentially preventable events as key healthcare outcome measures, which may encompass quality issues such as access to care, coordination of care, and quality of care. The effort related to potentially preventable events (PPE) began in January 2011, with reporting of Potentially Preventable Re-admissions (PPRs) to hospitals for fee-for-service (FFS) and managed care populations. In February 2012, HHSC began reporting rates and costs associated with Potentially Preventable Admissions (PPAs), PPRs, and Potentially Preventable Emergency Room Visit (PPVs) to the STAR, STAR+PLUS and CHIP managed care organizations (MCOs). This effort has expanded to include Potentially Preventable Complications (PPCs).

Potentially Preventable Ancillary Services (PPSs) will likely be a future measure but more development is needed.

HHSC has started to use performance data related to PPEs coupled with financial incentives/disincentives, to promote healthcare quality and efficiency within the Medicaid/CHIP programs. Although the focus on these measures is not specifically on asthma, asthma is a condition that is being tracked through this reimbursement incentive program.

Fee for Service Medicaid: In FFS Medicaid, hospital payment adjustments based on rates of PPRs were implemented in May 2013. HHSC implemented similar hospital payment adjustments for PPC later in November 2013.

Managed Care Medicaid/CHIP: MCO capitation rate adjustments are being implemented in fiscal year 2014. These adjustments are/will be based on each MCO's network hospitals' performance for PPR and PPC.

Additionally, beginning in calendar year 2014, PPVs, PPAs, and PPRs will also be utilized in the MCO incentive/disincentive (capitation at-risk) program. This program will place four percent of the MCOs capitation at risk based on performance on a set of quality measures, including PPV, PPA PPR.

Definition of PPEs and What Each Measures

- **Potentially Preventable Emergency Department Visits:** treatment of a person in a hospital emergency room or freestanding emergency medical care facility for a condition that may not require emergency medical attention because the condition could be, or could have been, treated or prevented by a physician or other health care provider in a nonemergency setting.

Designed to measure: Outpatient provider accessibility, quality and efficacy

- **Potentially Preventable Admissions:** an admission of a person to a hospital or long-term care facility that may have reasonably been prevented with adequate access to ambulatory care or health care coordination.

Designed to measure: Outpatient provider accessibility, quality and efficacy

- **Potentially Preventable Re-Admissions:** a return hospitalization of a person within a period specified by the commission that may have resulted from deficiencies in the care or treatment provided to the person during a previous hospital stay or from deficiencies in post-hospital discharge follow-up. The term does not include a hospital readmission necessitated by the occurrence of unrelated events after the discharge. The term includes the readmission of a person to a hospital for: (A) the same condition or procedure for which the person was previously admitted; (B) an infection or other complication resulting from care previously provided; or (C) a condition or procedure that indicates that a surgical intervention performed during a previous admission was unsuccessful in achieving the anticipated outcome.

Designed to measure: Hospital discharge process, MCO coordination of discharge and linkages to outpatient provider(s), outpatient provider coordination with discharging hospital, and accessibility, quality and efficacy

- **Potentially Preventable Complications:** a harmful event or negative outcome with respect to a person, including an infection or surgical complication, that: (A) occurs after the person's admission to a hospital or long-term care facility; and (B) may have resulted from the care, lack of care, or treatment provided during the hospital or long-term care facility stay rather than from a natural progression of an underlying disease.

Designed to measure: Quality and efficacy of care provided within a hospital setting

- **Potentially Preventable Ancillary Services:** a health care service provided or ordered by a physician or other health care provider to supplement or support the evaluation or treatment of a patient, including a diagnostic test, laboratory test, therapy service, or radiology service, that may not be reasonably necessary for the provision of quality health care or treatment.

Designed to measure: The appropriateness of testing for conditions

Managed Care Organization Performance Improvement Projects (PIPs)

There are also a number of Medicaid managed care performance improvement projects targeting asthma management, particularly preventing emergency room visits and inpatient admissions for asthma. An increased focus by Medicaid on asthma performance measures could serve as an opportunity to educate providers on the importance of testing newly diagnosed asthmatics for food allergies.

MCO Pay for Quality Program

As part of the 2014 at-risk component of managed care compensation, HHSC has included potentially preventable events. Those do include the full array of potentially preventable asthma emergency room and admission events. While those are not specific to the allergy-induced asthma events, a reduction in those would be reflected in the overall rates.

Policy Options for Texas

Description of the Medicaid Service Delivery System

While both billing codes related to blood-based allergy testing are already payable for Medicaid beneficiaries, there are a few options for the Texas Medicaid program to study or further address this issue.

A key factor to consider for any of the options outlined below is the current structure of the Texas Medicaid system. The Medicaid system in Texas has been undergoing a process of transformation since the late 1990s. With this process, Texas Medicaid is now administered through a predominantly managed care model, in which the state competitively procures full-risk MCO contracts as opposed to the FFS Medicaid system, in which the state's claims administrator pays provider claims on a unit-rate basis. Through more comprehensive managed care contracts, the MCOs develop provider networks, manage enrollee care through innovative approaches (such as alternative provider payment models, or other incentives/disincentives), adjudicate provider claims, maintain customer service centers, and provide other administrative services.

The transition of more populations and services to a managed care model will continue to occur as directed by S.B. 7, S.B. 58 and S.B. 8, 83rd Legislature, 2013. These populations and services include Nursing Facilities and Populations, Community Based Long Term Services and Supports, Children with Disabilities (S.B. 7), Mental Health Rehabilitation and Mental Health Targeted Case Management Services (S.B. 58) and Non-Emergency Medicaid Medical Transportation Services (S.B. 8).

As a result of the shrinking FFS Medicaid program, approaches to quality improvement must consider the dynamics and expectations inherent within a comprehensive and risk-based managed care contracting structure. This includes delineation of contractual requirements vis-à-vis state and federal requirements and priorities, assumption of risk by the contractors, but also the mutual alignment of State, MCO and provider incentives, when possible.

Summary of Potential Options and Considerations

There are a few options available to the Medicaid program to maximize quality improvements and achieve cost savings/efficiencies, specifically related to the

identification and treatment of asthma. As with many efforts to improve healthcare quality, a single option may not be sufficient in addressing the need. Often, combinations of options are needed. These options and considerations are described in the table below.

Table 3 Options and Considerations for Texas (not exhaustive)

<u>Option</u>	<u>Description of Option</u>	<u>Considerations</u>
Provider Education	Outreach to TMA, TPS and other professional organizations to provide information to their members on the value of testing possible asthmatics for an allergy that could be the cause of the asthma, and the appropriate treatment approaches in those cases.	Medicaid does not dictate professional treatment standards other than through the benefit.
Develop provider education for CEs	Add a course to the online free THSteps provider education at http://www.txhealthsteps.com/cms/	
MCO Education	Encourage the MCOs to alert the providers in their networks of the value of testing and appropriate treatment.	Medicaid does not dictate professional standards to the MCOs other than through the benefit.

Estimations of Quality and Fiscal Impacts, and Statutory Barriers

As part of the analysis, HHSC is to include

- An estimate of the number of recipients under the Medicaid program that would be impacted by implementation of the initiative; and
- A description of any potential cost savings to the state that would result from implementation of the initiative, and
- Any statutory barriers to implementation of the initiative.

Number of Medicaid Recipients Impacted and Potential Cost Savings

Given the time and resource constraints and using only claims data, HHSC did not have a method to gather sufficient information on the number of current or future Medicaid recipients who might have an allergy-induced asthma and have not been tested for it even though the service is a benefit. Accordingly, it was also not possible to estimate potential cost savings if more recipients were tested. Treatment decisions, which ultimately might affect cost savings, are in the purview of the provider, and not for HHSC to determine

Statutory Barriers

There are no statutory barriers as this is already a Medicaid benefit.

Conclusion

The legislative initiative was to conduct an analysis of the rationale for and feasibility of providing blood-based allergy testing for Medicaid patients with persistent asthma to develop an appropriate treatment strategy that would minimize exposure to allergy-induced asthma attacks. There is sufficient clinical support for providing blood based allergy testing for this, and other allergy patient populations. Outreach to provider organizations and provider education to present information specific to the testing needs of the subset of asthma patients who may benefit from allergy testing as part of the disease workup is an option. This could result in more targeted treatment of the allergy component of disease which could decrease the number and severity of future asthma events.

Endnotes

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