

Medical Coverage Policy | Progesterone Therapy as a Technique to Reduce Preterm Birth in High-Risk Pregnancies



EFFECTIVE DATE: 7/01/2017

POLICY LAST UPDATED: 06/06/2017

OVERVIEW

Preterm birth is the leading cause of neonatal morbidity and mortality, and effective primary preventive interventions have remained elusive. In recent years, there has been renewed interest in the use of progesterone (injectable and intravaginal formulations) to prevent preterm birth. This policy addresses treatment with the use of progesterone (injectable) to prevent preterm birth. This policy is applicable to Blue CHiP for Medicare and Commercial products. Note: Intravaginal formulations are covered as part of the member's pharmacy benefit.

MEDICAL CRITERIA

Brand name Makena is medically necessary when all of the following criteria has been met:

1. Patient is between 16 and 36 weeks gestation AND
2. Patient has a history of live spontaneous preterm singleton delivery before 37 weeks gestation AND
- 3.. Patient has no preterm labor in the current pregnancy AND
4. Patient has no allergies to components of Makena AND
5. Patient does not have any of the following exclusions (other risk factors for preterm delivery):
 - a. twin or multiple gestation;
 - b. prior episode of preterm labor in current pregnancy (ie, progesterone therapy in conjunction with tocolysis or following successful tocolysis);
 - c. positive test for cervicovaginal fetal fibronectin;
 - d. cervical cerclage; and/or
 - e. uterine anomaly
 - f. fetal anomaly

PRIOR AUTHORIZATION

Prior authorization is required for BlueCHiP for Medicare and recommended for Commercial Products for brand name Makena only.

POLICY STATEMENT

BlueCHiP for Medicare and Commercial

Compounded 17P and Generic hydroxyprogesterone caproate

Progesterone therapy (Compounded 17P and Generic hydroxyprogesterone caproate) is medically necessary for women with a singleton pregnancy and prior history of spontaneous preterm birth before 37 weeks of gestation or for women with a singleton pregnancy and a short cervix (<20 mm). All other indications are not medically necessary that there is not any peer reviewed scientific evidence to support its efficacy.

Makena - Brand name hydroxyprogesterone caproate

If it is necessary for a patient to take the brand Makena rather than the compounded version 17P, Makena is medically necessary if the medical criteria above is met.

COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Evidence of Coverage, Subscriber Agreement for applicable physician administered drug or specialty pharmacy benefits/coverage.

BACKGROUND

Preterm birth is the leading cause of neonatal morbidity and mortality, and effective primary preventive interventions have remained elusive. In recent years, there has been renewed interest in the use of progesterone (injectable and intravaginal formulations) to prevent preterm birth.

There is sufficient evidence from randomized controlled trials (RCTs) and meta-analyses of RCTs that injectable and vaginal progesterone are associated with improved health outcomes in women with singleton pregnancies who have a history of prior preterm birth. In addition, there is sufficient evidence that progesterone improves health outcomes in women with singleton pregnancies and short cervical length. Thus, progesterone therapy may be considered medically necessary in these situations for selected women who meet clinical criteria.

Preterm labor and delivery are major determinants of neonatal morbidity and mortality. In the United States, the rate of preterm birth is 12%. A variety of diagnostic and prophylactic measures have been investigated including home uterine activity monitoring, subcutaneous terbutaline tocolytic therapy, and routine culture and antibiotic treatment of subclinical bacterial vaginosis. To date, none of these have made a significant demonstrable impact on the incidence of preterm delivery. In the past, intramuscular (IM) injections of hydroxyprogesterone caproate (ie, Delalutin) were used routinely to prevent premature labor. However, the drug was shown to have teratogenic properties, and FDA labeled the drug as Category D (ie, studies have demonstrated fetal risk, but use of the drug may outweigh the potential risk). Delalutin was voluntarily withdrawn from the market in 1999.

In recent years, there has been renewed research interest in IM injection of 17 β -hydroxyprogesterone caproate (17P). 17P is a weakly acting, naturally occurring progesterone metabolite, which when coupled with caproate dextran works as a long-acting progestin when administered intramuscularly. 17P has been manufactured locally by compounding pharmacies. After an extended application process, Makena®, another injectable form of 17P was approved by FDA in February 2011. Intravaginal progesterone gel and suppositories have also been used.

The FDA reviewed the potency and purity data on the compounded versions of 17P, findings that all samples tested passed the USP tests for potency and total purity and stating that the compounded versions “do not raise safety concerns” and released a statement permitting the continued compounding of 17P despite the availability of Makena.

Although Makena and 17P contain the same active ingredient in the same concentration, with castor oil as an inactive ingredient, only Makena contains preservatives (benzyl benzoate and benzyl alcohol). Based on the active ingredient, compounded 17P is considered clinically interchangeable with Makena. The ACOG and the Society for Maternal Fetal Medicine (SMFM) released a joint statement: “[While] there are clear benefits to having an FDA-approved version of 17P, there is no evidence that Makena is more effective or safer than the currently used compounded version.”

Progesterone is used for the following indications:

For women with a singleton pregnancy and prior history of spontaneous preterm birth before 37 weeks of gestation, the following may be considered medically necessary:

- Weekly injections of 17 β -hydroxyprogesterone caproate, performed in the office setting, initiated between 16 and 20 weeks of gestation and continued until 36 weeks 6 days
- Daily vaginal progesterone between 24 and 34 weeks of gestation
- For women with a singleton pregnancy and a short cervix (<20 mm), the following may be considered medically necessary:
 - Daily vaginal progesterone initiated between 20 and 23 weeks 6 days of gestation and continued until 36 weeks 6 days

Progesterone therapy as a technique to prevent preterm delivery is considered not medically necessary in pregnant women with other risk factors for preterm delivery, including but not limited to:

- twin or multiple gestation;
- prior episode of preterm labor in current pregnancy (ie, progesterone therapy in conjunction with tocolysis or following successful tocolysis);
- positive test for cervicovaginal fetal fibronectin;
- cervical cerclage; and/or
- Uterine anomaly.

There is sufficient evidence from randomized controlled trials (RCTs) and meta-analyses of RCTs that injectable and vaginal progesterone are associated with improved health outcomes in women with singleton pregnancies who have a history of prior preterm birth. In addition, there is sufficient evidence that progesterone improves health outcomes in women with singleton pregnancies and short cervical length. Thus, progesterone therapy may be considered medically necessary in the above situations for selected women who meet clinical criteria.

The evidence is insufficient that progesterone is effective for reducing preterm delivery in other situations such as women with twin or multiple gestations, women with preterm rupture of the membranes, or women with a prior episode of preterm labor in the current pregnancy (in conjunction with or following tocolysis) and thus these indications are considered investigational.

CODING

BlueCHiP for Medicare and Commercial

For claims prior to 7/1/2017

Brand Name- Makena

The following HCPCS is medically necessary when criteria has been met as this the HCPCS code for the brand name drug

J1725 - Injection, hydroxyprogesterone caproate, 1 mg

Note: claims filed with this code after 7/12/2017 will deny as use alternate code.

Compound Formula

Claims must be submitted with the unlisted J code and the applicable NDC

For Claims after 7/1/2017

The following HCPCS is medically necessary when criteria has been met as this is for the brand name drug

Brand Name- Makena

Q9986 Injection, hydroxyprogesterone caproate (Makena), 10 mg

Effective 1/1/2018, the following code should be used

J1726 Injection, hydroxyprogesterone caproate, (makena), 10 mg

The following codes are covered

Generic hydroxyprogesterone

Q9985 Injection, hydroxyprogesterone caproate, not otherwise specified, 10 mg (new code as of 7/1/2017)

Effective 1/1/2018, the following code should be used

J1729 Injection, hydroxyprogesterone caproate, not otherwise specified, 10 mg

Compound Formula

Claims must be submitted with the unlisted J code and the applicable NDC

RELATED POLICIES

None

PUBLISHED

Provider Update August 2017

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Provider Update Sept 2015

REFERENCES:

1. Sotiriadis A, Papatheodorou S, Makrydimas G. Perinatal outcome in women treated with progesterone for the prevention of preterm birth: a meta-analysis. *Ultrasound Obstet Gynecol.* May 18 2012;40(3):257-266. PMID 22611023
2. Rode L, Langhoff-Roos J, Andersson C, et al. Systematic review of progesterone for the prevention of preterm birth in singleton pregnancies. *Acta Obstet Gynecol Scand.* 2009;88(11):1180-1189. PMID 19900136
3. Dodd JM, Jones L, Flenady V, et al. Prenatal administration of progesterone for preventing preterm birth in women considered to be at risk of preterm birth. *Cochrane Database Syst Rev.* 2013;7:CD004947. PMID 23903965
4. Meis PJ, Klebanoff M, Thom E, et al. Prevention of recurrent preterm delivery by 17 alpha-hydroxyprogesterone caproate. *N Engl J Med.* Jun 12 2003;348(24):2379-2385. PMID 12802023
5. Northen AT, Norman GS, Anderson K, et al. Follow-up of children exposed in utero to 17 alpha-hydroxyprogesterone caproate compared with placebo. *Obstet Gynecol.* Oct 2007;110(4):865-872. PMID 17906021
6. O'Brien JM, Adair CD, Lewis DF, et al. Progesterone vaginal gel for the reduction of recurrent preterm birth: primary results from a randomized, double-blind, placebo-controlled trial. *Ultrasound Obstet Gynecol.* Oct 2007;30(5):687-696. PMID 17899572
7. da Fonseca EB, Bittar RE, Carvalho MH, et al. Prophylactic administration of progesterone by vaginal suppository to reduce the incidence of spontaneous preterm birth in women at increased risk: a randomized placebo-controlled double-blind study. *Am J Obstet Gynecol.* Feb 2003;188(2):419-424. PMID 12592250
8. Majhi P, Bagga R, Kalra J, et al. Intravaginal use of natural micronised progesterone to prevent pre-term birth: a randomised trial in India. *J Obstet Gynaecol.* Aug 2009;29(6):493-498. PMID 19697195
9. Maher MA, Abdelaziz A, Ellaithy M, et al. Prevention of preterm birth: a randomized trial of vaginal compared with intramuscular progesterone. *Acta Obstet Gynecol Scand.* Feb 2013;92(2):215-222. PMID 23016508
10. Grobman WA, Thom EA, Spong CY, et al. 17 alpha-hydroxyprogesterone caproate to prevent prematurity in nulliparas with cervical length less than 30 mm. *Am J Obstet Gynecol.* Nov 2012;207(5):390 e391-398. PMID 23010094
11. Berghella V, Figueroa D, Szychowski JM, et al. 17-alpha-hydroxyprogesterone caproate for the prevention of preterm birth in women with prior preterm birth and a short cervical length. *Am J Obstet Gynecol.* Apr 2010;202(4):351 e351-356. PMID 20350641
12. Romero R, Nicolaides K, Conde-Agudelo A, et al. Vaginal progesterone in women with an asymptomatic sonographic short cervix in the midtrimester decreases preterm delivery and neonatal morbidity: a systematic review and metaanalysis of individual patient data. *Am J Obstet Gynecol.* Feb 2012;206(2):124 e121-119. PMID 22284156
13. Hassan SS, Romero R, Vidyadhari D, et al. Vaginal progesterone reduces the rate of preterm birth in women with a sonographic short cervix: a multicenter, randomized, double-blind, placebo-controlled trial. *Ultrasound Obstet Gynecol.* Jul 2011;38(1):18-31. PMID 21472815
14. Fonseca EB, Celik E, Parra M, et al. Progesterone and the risk of preterm birth among women with a short cervix. *N Engl J Med.* Aug 2 2007;357(5):462-469. PMID 17671254
15. Schuit E, Stock S, Rode L, et al. Effectiveness of progestogens to improve perinatal outcome in twin pregnancies: an individual participant data meta-analysis. *BJOG.* Aug 22 2014. PMID 25145491
16. Rode L, Klein K, Nicolaides KH, et al. Prevention of preterm delivery in twin gestations (PREDICT): a multicenter, randomized, placebo-controlled trial on the effect of vaginal micronized progesterone. *Ultrasound Obstet Gynecol.* Sep 2011;38(3):272-280. PMID 21739497

17. Caritis SN, Rouse DJ, Peaceman AM, et al. Prevention of preterm birth in triplets using 17 alpha-hydroxyprogesterone caproate: a randomized controlled trial. *Obstet Gynecol.* Feb 2009;113(2 Pt 1):285-292. PMID 19155896
18. Combs CA, Garite T, Maurel K, et al. Failure of 17-hydroxyprogesterone to reduce neonatal morbidity or prolong triplet pregnancy: a double-blind, randomized clinical trial. *Am J Obstet Gynecol.* Sep 2010;203(3):248 e241-249. PMID 20816146
19. Briery CM, Veillon EW, Klauser CK, et al. Women with preterm premature rupture of the membranes do not benefit from weekly progesterone. *Am J Obstet Gynecol.* Jan 2011;204(1):54 e51-55. PMID 20869038
20. Briery CM, Klauser CK, Martin RW, et al. The use of 17-hydroxy progesterone in women with arrested preterm labor: a randomized clinical trial. *J Matern Fetal Neonatal Med.* Mar 10 2014. PMID 24512252
21. Elimian A, Smith K, Williams M, et al. A randomized controlled trial of intramuscular versus vaginal progesterone for the prevention of recurrent preterm birth. *Int J Gynaecol Obstet.* Aug 2016;134(2):169-172. PMID 27168167
22. Bafghi AS, Bahrami E, Sekhvat L. Comparative study of vaginal versus intramuscular progesterone in the prevention of preterm delivery: a randomized clinical trial. *Electron Physician.* Oct 2015;7(6):1301-1309. PMID 26516434
23. El-refaie W, Abdelhafez MS, Badawy A. Vaginal progesterone for prevention of preterm labor in asymptomatic twin pregnancies with sonographic short cervix: a randomized clinical trial of efficacy and safety. *Arch Gynecol Obstet.* Jan 2016;293(1):61-67. PMID 26044148

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