HEALTH PLANS
UNIVERSITY OF UTAH

Medical Policy

Dry Needling

Policy MP-059

Origination Date: 07/22/2020

Reviewed/Revised Date: 07/21/2021

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Disclaimer:

1. Policies are subject to change in accordance with State and Federal notice requirements.
2. Policies outline coverage determinations for U of U Health Plans Commercial, and Healthy U (Medicaid) plans. Refer to the "Policy" section for more information.

Description:

Globally, the prevalence of neck pain increased by 21% from 2005 to 2015, affecting more than 358 million people in 2015. In the 2015 National Health Interview Survey, almost 39 million adults reported having neck pain, an age-adjusted rate of 15.7% of the U.S. population. Myofascial pain—a pain in the muscle or connective tissue (fascia) that is usually associated with myofascial trigger points (TrPs)—is present in approximately 30% to 85% of patients who present with pain at a primary care facility or pain clinic.

Migraines or severe headaches, face or jaw pain, or low back pain (LBP), respectively, affect more than 36 million, 10 million, and 72 million adults in the United States. The age-adjusted prevalence among adults in the United States is 15% for migraine or severe headaches, 29% for LBP, 4% for face or jaw pain, 10% to 15% for temporomandibular disorders (TMD), and 18% to 26% for shoulder pain. Knee pain affects approximately 25% of adults.

Dry needling involves the provider inserting a dry solid filament needle through the skin and into one or two muscles in (CPT 20560) and into three or more muscles in (CPT 20561). Indicated for myofascial pain relief and movement impairments, trigger points (focal, discrete spots of hypersensitive irritability identified within bands of muscle) are often the target of insertion. These points cause local or referred pain and may be formed by acute or repetitive trauma to the muscle tissue. This procedure, also known as dry needling or trigger-point acupuncture, does not involve the administration of injectable therapeutic agents.

Policy Statement and Criteria

1. Commercial Plans

U of U Health Plans does NOT cover dry needling for <u>any</u> indication as it is considered investigational, since current published literature is insufficient to determine proven benefit.

2. **Medicaid Plans**
   Coverage is determined by the State of Utah Medicaid program; if Utah State Medicaid has no published coverage position and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicaid policies and coverage, please visit their website at http://health.utah.gov/medicaid/manuals/directory.php or the Utah Medicaid code Look-Up tool

3. **Medicare Plans**
   Coverage is determined by the Centers for Medicare and Medicaid Services (CMS); if a coverage determination has not been adopted by CMS and InterQual criteria are not available, the U of U Health Plans Commercial criteria will apply. For the most up-to-date Medicare policies and coverage, please visit their search website at: http://www.cms.gov/medicare-coverage-database/overview-and-quick-search.aspx?from2=search1.asp& or the manual website

Clinical Rationale

The overall body of evidence evaluated indicates that dry needling (DN) is safe and well tolerated in adults with mechanical neck and/or trapezius muscle pain. Compared with inactive controls, DN showed significant and consistent improvement in pain, disability, and function as well as clinically meaningful improvements in patient-reported pain. Results of studies comparing DN with active treatments showed similar outcomes between the groups for pain, function, and disability in most studies; however, DN was less efficacious in some studies. There was also considerable variation in active treatments across the studies.

DN versus control (i.e., sham DN, inactive DN, or no DN) treatment was associated with statistically significant improvements in self-reported pain, PPT, ROM, neck disability, QOL, and analgesic use. One study found that DN versus sham DN did not improve self-rated recovery. One measure of pain across 4 studies showed that the magnitude of effect of the benefit of DN was clinically meaningful.

Patient-reported pain outcomes were not significantly improved in the majority of studies identified or showed less improvement with DN when compared with other active treatments. Comparisons of efficacy may have been hampered by the heterogeneity in active treatments across the studies as well as questions about the relevance of the comparator treatments.

DN versus other active treatment was also associated with no significant improvement in other outcomes such as neck disability, PPT, ROM, QOL, and analgesic use.

A few studies have reported mild reactions such as self-resolving muscle soreness and sweating but no studies reported major adverse events,

While DN produced better outcomes than sham DN or inactive control, and had similar efficacy as most other alternative treatments, there is a lack of long-term follow-up data to determine the durability of any benefits. Patients were followed in most of the reviewed studies for a short time ranging from immediately after treatment to 6 months, with only 1 study having 1-year follow-up.

DN treatment protocols, concomitant use (or not) of stretching or physical therapy, methods for confirming pain originating from trigger points, clinical history, and patient inclusion criteria varied

somewhat among the studies, making it difficult to compare study results and draw definitive conclusions about relative efficacy.

It is unclear whether the benefits achieved by DN in terms of pain relief and improved function are of sufficient magnitude to outweigh the potential discomfort of a needle insertion and manipulation, particularly compared with other noninvasive treatments.

As it relates to other indications for us of dry needling, the overall body of evidence evaluated indicates DN is safe and well tolerated in adults with headache/migraine, jaw muscle pain, LBP, shoulder pain, or knee pain. Within each indication, the studies varied in terms of patient inclusion criteria, DN treatment protocols, active comparators, and concomitant use (or not) of other therapies (e.g., PT, medications), making it difficult to compare study results and draw definitive conclusions about relative efficacy. Furthermore, the underlying cause and type of pain often varied within an indication (acute versus chronic, surgical versus traumatic). Importantly, standardized methods for confirming pain originating from trigger points remain to be defined. Therefore, while results suggest that DN might be beneficial for some patient populations, there is insufficient evidence to provide definitive conclusions regarding the efficacy of DN.

Applicable Coding

CPT Codes

20560 Needle insertion(s) without injection(s); 1 or 2 muscle(s)

20561 Needle insertion(s) without injection(s); 3 or more muscles

HCPCS Codes

No applicable HCPCS codes

References:

1. Arias-Buria JL, Fernandez-de-Las-Penas C, Palacios-Cena M, Koppenhaver SL, Salom-Moreno J. Exercises and dry needling for subacromial pain syndrome: a randomized parallel-group trial. J Pain. 2017;18(1):11-18.
2. Aridici R, Yetisgin A, Boyaci A, et al. Comparison of the efficacy of dry needling and high-power pain threshold ultrasound therapy with clinical status and sonoelastography in myofascial pain syndrome. *Am J Phys Med Rehabil*. 2016;95(10):e149-e158.
3. Becker WJ, Findlay T, Moga C, Scott NA, Harstall C, Taenzer P. Guideline for primary care management of headache in adults. Can Fam Physician. 2015;61(8):670-679.
4. Beran RG. Management of chronic headache. Aust Fam Physician. 2014;43(3):106-110.
5. Blackwell DL, Villarroel MA. Tables of Summary Health Statistics for U.S. Adults: 2015 National Health Interview Survey. National Center for Health Statistics. National Center for Health Statistics (NCHS); 2016.
6. Brady S, McEvoy J, Dommerholt J, Doody C. Adverse events following trigger point dry needling: a prospective survey of chartered physiotherapists. J Man Manip Ther. 2014;22(3):134-140.
7. Brennan KL, Allen BC, Maldonado YM. Dry needling versus cortisone injection in the treatment of greater trochanteric pain syndrome: a non-inferiority randomized clinical trial. J Orthop Sports Phys Ther. 2017;47(4):232-239.
8. Calvo-Lobo C, Pacheco-da-Costa S, Martinez-Martinez J, Rodriguez-Sanz D, Cuesta-Alvaro P, Lopez-Lopez D. Dry needling on the infraspinatus latent and active myofascial trigger points in older adults with nonspecific shoulder pain: a randomized clinical trial.
9. Casanueva B, Rivas P, Rodero B, Quintial C, Llorca J, Gonzalez-Gay MA. Short-term improvement following dry needle stimulation of tender points in fibromyalgia. Rheumatol Int. 2014;34(6):861-866.
10. Castro-Sanchez AM, Garcia-Lopez H, Mataran-Penarrocha GA, et al. Effects of dry needling on spinal mobility and trigger points in patients with fibromyalgia syndrome. Pain Physician. 2017;20(2):37-52.
11. Cerezo-Tellez E, Lacomba MT, Fuentes-Gallardo I, Mayoral Del Moral O, Rodrigo-Medina B, Gutierrez Ortega C. Dry needling of the trapezius muscle in office workers with neck pain: a randomized clinical trial. *J Man Manip Ther*. 2016a;24(4):223-232.

12. Cerezo-Tellez E, Torres-Lacomba M, Fuentes-Gallardo I, et al. Effectiveness of dry needling for chronic nonspecific neck pain: a randomized, single-blinded, clinical trial. *Pain*. 2016b;157(9):1905-1917.
13. Cohen SP. Epidemiology, diagnosis, and treatment of neck pain. *Mayo Clin Proc*. 2015;90(2):284-299.
14. Cossarizza, A., et al. (2019). "Guidelines for the use of flow cytometry and cell sorting in immunological studies (second edition)." Eur J Immunol 49(10): 1457-1973.
15. Cotchett MP, Munteanu SE, Landorf KB. Effectiveness of trigger point dry needling for plantar heel pain: a randomized controlled trial. Phys Ther. 2014;94(8):1083-1094.
16. Couto C, de Souza IC, Torres IL, Fregni F, Caumo W. Paraspinal stimulation combined with trigger point needling and needle rotation for the treatment of myofascial pain: a randomized sham-controlled clinical trial. *Clin J Pain*. 2014;30(3):214-223.
17. De Meulemeester KE, Castelein B, Coppieters I, Barbe T, Cools A, Cagnie B. Comparing trigger point dry needling and manual pressure technique for the management of myofascial neck/shoulder pain: a randomized clinical trial. *J Manipulative Physiol Ther*. 2017;40(1):11-20.
18. Diercks R, Bron C, Dorrestijn O, et al. Guideline for diagnosis and treatment of subacromial pain syndrome: a multidisciplinary review by the Dutch Orthopaedic Association. Acta Orthop. 2014;85(3):314-322.
19. Eftekharsadat B, Babaei-Ghazani A, Zeinolabedinzadeh V. Dry needling in patients with chronic heel pain due to plantar fasciitis: a single-blinded randomized clinical trial. Med J Islam Repub Iran. 2016;30:401.
20. Espí-López GV, Serra-Añó P, Vicent-Ferrando J, et al. Effectiveness of inclusion of dry needling into a multimodal therapy program for patellofemoral pain: a randomized parallel-group trial. J Orthop Sports Phys Ther. 2017;13:1-43.
21. Espí-López GV, Serra-Añó P, Vicent-Ferrando J, et al. Effectiveness of inclusion of dry needling in a multimodal therapy program for patellofemoral pain: a randomized parallel-group trial. J Orthop Sports Phys Ther. 2017;47(6):392-401.
22. Fan AY, Xu J, Li YM. Evidence and expert opinions: dry needling versus acupuncture (I): the American Alliance for Professional Acupuncture Safety (AAPAS) White Paper 2016. *Chin J Integr Med.* 2017;23(1):3-9.
23. France S, Bown J, Nowosilskyj M, Mott M, Rand S, Walters J. Evidence for the use of dry needling and physiotherapy in the management of cervicogenic or tension-type headache: a systematic review. Cephalalgia. 2014;34(12):994-1003.
24. Franchignoni F, Vercelli S, Giordano A, Sartorio F, Bravini E, Ferriero G. Minimal clinically important difference of the disabilities of the arm, shoulder and hand outcome measure (DASH) and its shortened version (QuickDASH). J Orthop Sports Phys Ther. 2014;44(1):30-39
25. Gattie E, Cleland JA, Snodgrass S. The effectiveness of trigger point dry needling for musculoskeletal conditions by physical therapists: a systematic review and meta-analysis. *J Orthop Sports Phys Ther.* 2017;47(3):133-149.
26. Gauer RL, Semidey MJ. Diagnosis and treatment of temporomandibular disorders. Am Fam Physician. 2015;91(6):378-386.
27. GBD 2015 Disease and Injury Incidence and Prevalence Collaborators. Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet. 2016;388(10053):1545-1602.
28. Gerber LH, Shah J, Rosenberger W, et al. Dry needling alters trigger points in the upper trapezius muscle and reduces pain in subjects with chronic myofascial pain. *PM R*. 2015;7(7):711-718.
29. Gerber LH, Sikdar S, Aredo JV, et al. Beneficial effects of dry needling for treatment of chronic myofascial pain persist for 6 weeks after treatment completion. *PM R*. 2017;9(2):105-112.
30. Global Burden of Disease (GBD). Global, regional, and national incidence, prevalence, and years lived with disability for 310 diseases and injuries, 1990-2015: a systematic analysis for the Global Burden of Disease Study 2015. *Lancet*. 2016;388(10053):1545-1602.
31. Gonzalez-Perez LM, Infante-Cossio P, Granados-Nunez M, Urresti-Lopez FJ, Lopez-Martos R, Ruiz-Canela-Mendez P. Deep dry needling of trigger points located in the lateral pterygoid muscle: efficacy and safety of treatment for management of myofascial pain and temporomandibular dysfunction. Med Oral Patol Oral Cir Bucal. 2015;20(3):e326-e333.
32. Hayes Inc., “Acupuncture for the Treatment of Allergic Rhinitis”. Archived: May 18, 2021. Accessed: July 11, 2021.
33. Hayes Inc., “Acupuncture for Treatment of Fibromyalgia”. Annual Review: December 10, 2020. Accessed: July 11, 2021.
34. Hayes Inc., “Comparative Effectiveness Comparative Effectiveness Review of Dry Needling for Mechanical Neck and/or Trapezius Muscle Pain in Adults”. Annual Update Jun 23, 2020. Accessed on July 5, 2020.
35. Hayes Inc., “Comparative Effectiveness Review Comparative Effectiveness Review of Dry Needling for Indications Other Than Neck or Trapezius Muscle Pain in Adults”. Annual Update: Jun 24, 2020; Accessed July 5, 2020
36. Hayes Inc., “Evidence Analysis Research Brief. Dry Needling for Pelvic Floor Muscle Dysfunction or Pain”. Last update: June 23, 2021. Accessed: July 11, 2021.
37. Itoh K, Saito S, Sahara S, Naitoh Y, Imai K, Kitakoji H. Randomized trial of trigger point acupuncture treatment for chronic shoulder pain: a preliminary study. *J Acupunct Meridian Stud*. 2014;7(2):59-64.
38. Katz NP, Paillard FC, Ekman E. Determining the clinical importance of treatment benefits for interventions for painful orthopedic conditions. *J Orthop Surg Res*. 2015;10:24.
39. Koppenhaver S, Embry R, Ciccarello J, et al. Effects of dry needling to the symptomatic versus control shoulder in patients with unilateral subacromial pain syndrome. Man Ther. 2016;26:62-69.

40. Kroft, S. H., et al. (2021). "Laboratory Workup of Lymphoma in Adults: Guideline From the American Society for Clinical Pathology and the College of American Pathologists." Arch Pathol Lab Med 145(3): 269-290.
41. Leon-Hernandez JV, Martin-Pintado-Zugasti A, Frutos LG, Alguacil-Diego IM, de la Llave-Rincon AI, Fernandez-Carnero J. Immediate and short-term effects of the combination of dry needling and percutaneous tens on post-needling soreness in patients with chronic myofascial neck pain. *Braz J Phys Ther*. 2016;20(5):422-431.
42. Linaker CH, Walker-Bone K. Shoulder disorders and occupation. Best Pract Res Clin Rheumatol. 2015;29(3):405-423.
43. Liu L, Huang QM, Liu QG, et al. Effectiveness of dry needling for myofascial trigger points associated with neck and shoulder pain: a systematic review and meta-analysis. Arch Phys Med Rehabil. 2015;96(5):944-955.
44. Liu L, Huang QM, Liu QG, et al. Effectiveness of dry needling for myofascial trigger points associated with neck and shoulder pain: a systematic review and meta-analysis. *Arch Phys Med Rehabi*l. 2015;96(5):944-955.
45. Llamas-Ramos R, Pecos-Martin D, Gallego-Izquierdo T, et al. Comparison of the short-term outcomes between trigger point dry needling and trigger point manual therapy for the management of chronic mechanical neck pain: a randomized clinical trial. *J Orthop Sports Phys Ther*. 2014;44(11):852-861.
46. Mahmoudzadeh A, Rezaeian ZS, Karimi A, Dommerholt J. The effect of dry needling on the radiating pain in subjects with discogenic low-back pain: a randomized control trial. J Res Med Sci. 2016;21:86.
47. Mason JS, Crowell M, Dolbeer J, et al. The effectiveness of dry needling and stretching vs. stretching alone on hamstring flexibility in patients with knee pain: a randomized controlled trial. Int J Sports Phys Ther. 2016;11(5):672-683.
48. Mejuto-Vazquez MJ, Salom-Moreno J, Ortega-Santiago R, Truyols-Dominguez S, Fernandez-de-Las-Penas C. Short-term changes in neck pain, widespread pressure pain sensitivity, and cervical range of motion after the application of trigger point dry needling in patients with acute mechanical neck pain: a randomized clinical trial. *J Orthop Sports Phys Ther*. 2014;44(4):252-260.
49. National Comprehensive Cancer Network (NCCN). NCCN Guidelines “Acute lymphoblastic leukemia”. Version 1.2021.
50. National Comprehensive Cancer Network (NCCN). NCCN Guidelines “Acute myeloid leukemia”. Version 3.2021.
51. National Comprehensive Cancer Network (NCCN). NCCN Guidelines “B-cell lymphomas”. Version 4.2021.
52. National Comprehensive Cancer Network (NCCN). NCCN Guidelines “Waldenstrom's Macroglobulinemia Lymphoplasmacytic Lymphoma”. Version 1.2022.
53. Ong J, Claydon LS. The effect of dry needling for myofascial trigger points in the neck and shoulders: a systematic review and meta-analysis. *J Bodyw Mov Ther*. 2014;18(3):390-398.
54. Pecos-Martin D, Montanez-Aguilera FJ, Gallego-Izquierdo T, et al. Effectiveness of dry needling on the lower trapezius in patients with mechanical neck pain: a randomized controlled trial. *Arch Phys Med Rehabil*. 2015;96(5):775-781.
55. Perez-Palomares S, Olivan-Blazquez B, Perez-Palomares A, et al. Contribution of dry needling to individualized physical therapy treatment of shoulder pain: a randomized clinical trial. J Orthop Sports Phys Ther. 2017;47(1):11-20.
56. Ratmansky M, Minerbi A, Kalichman L, et al. Position statement of the Israeli Society for Musculoskeletal Medicine on intramuscular stimulation for myofascial pain syndrome-a Delphi process. Pain Pract. 2017;17(4):438-446.
57. Rodriguez-Mansilla J, Gonzalez-Sanchez B, De Toro Garcia A, et al. Effectiveness of dry needling on reducing pain intensity in patients with myofascial pain syndrome: a meta-analysis. *J Tradit Chin Med*. 2016;36(1):1-13.
58. Salom-Moreno J, Ayuso-Casado B, Tamaral-Costa B, Sanchez-Mila Z, Fernandez-de-Las-Penas C, Alburquerque-Sendin F. Trigger point dry needling and proprioceptive exercises for the management of chronic ankle instability: a randomized clinical trial. Evid Based Complement Alternat Med. 2015;2015:790209.
59. Salom-Moreno J, Sanchez-Mila Z, Ortega-Santiago R, Palacios-Cena M, Truyol-Dominguez S, Fernandez-de-las-Penas C. Changes in spasticity, widespread pressure pain sensitivity, and baropodometry after the application of dry needling in patients who have had a stroke: a randomized controlled trial. J Manipulative Physiol Ther. 2014;37(8):569-579.
60. Schwedt TJ. Chronic migraine. BMJ. 2014;348:g1416.
61. Segura-Orti E, Prades-Vergara S, Manzaneda-Pina L, Valero-Martinez R, Polo-Traverso JA. Trigger point dry needling versus strain-counterstrain technique for upper trapezius myofascial trigger points: a randomised controlled trial. *Acupunct Med*. 2016;34(3):171-177.
62. Shah JP, Thaker N, Heimur J, Aredo JV, Sikdar S, Gerber L. Myofascial trigger points then and now: a historical and scientific perspective. *PM R*. 2015;7(7):746-761.
63. Sterling M, Vicenzino B, Souvlis T, Connelly LB. Dry-needling and exercise for chronic whiplash-associated disorders: a randomized single-blind placebo-controlled trial. *Pain*. 2015;156(4):635-643.
64. Unverzagt C, Berglund K, Thomas JJ. Dry needling for myofascial trigger point pain: a clinical commentary. *Int J Sports Phys Ther*. 2015;10(3):402-418.
65. UpToDate®. “Acupuncture”. Literature review current through: June 2021. Last topic updated: Oct 27, 2020. Accessed: July 11, 2021.
66. Velázquez-Saornil J, Ruíz-Ruíz B, Rodríguez-Sanz D, Romero-Morales C, López-López D, Calvo-Lobo C. Efficacy of quadriceps vastus medialis dry needling in a rehabilitation protocol after surgical reconstruction of complete anterior cruciate ligament rupture. Medicine (Baltimore). 2017;96(17):e6726.

67. Wang G, Gao Q, Hou J, Li J. Effects of temperature on chronic trapezius myofascial pain syndrome during dry needling therapy. *Evid Based Complement Alternat Med*. 2014;2014:638268.
68. Wong AY, Karppinen J, Samartzis D. Low back pain in older adults: risk factors, management options and future directions. Scoliosis Spinal Disord. 2017;12:14.
69. Yeganeh Lari A, Okhovatian F, Naimi S, Baghban AA. The effect of the combination of dry needling and met on latent trigger point upper trapezius in females. *Man Ther*. 2016;21:204-209.
70. Zheng Y, Shi D, Wu X, et al. Ultrasound-guided miniscalpel-needle release versus dry needling for chronic neck pain: a randomized controlled trial. *Evid Based Complement Alternat Med*. 2014;2014:235817.
71. Ziaeifar M, Arab AM, Nourbakhsh MR. Clinical effectiveness of dry needling immediately after application on myofascial trigger point in upper trapezius muscle. *J Chiropr Med*. 2016;15(4):252-258.