MEDICAL POLICY

MEDICAL POLICY DETAILS	
Medical Policy Title	**Metal-on-Metal Total Hip Resurfacing**
Policy Number	**7.01.74**
Category	**Technology Assessment**
Original Effective Date	**06/15/06**
Committee Approval Date	**07/19/07, 05/14/08, 04/16/09, 03/18/10, 02/17/11, 02/16/12**
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Product Disclaimer	• *Services are contract dependent; if a product excludes coverage for a service, it is not covered, and medical policy criteria do not apply.* • *If a commercial product (including an Essential Plan or Child Health Plus product), medical policy criteria apply to the benefit.* • *If a Medicaid product covers a specific service, and there are no New York State Medicaid guidelines (eMedNY) criteria, medical policy criteria apply to the benefit.* • *If a Medicare product (including Medicare HMO-Dual Special Needs Program (DSNP) product) covers a specific service, and there is no national or local Medicare coverage decision for the service, medical policy criteria apply to the benefit.* • *If a Medicare HMO-Dual Special Needs Program (DSNP) product DOES NOT cover a specific service, please refer to the Medicaid Product coverage line.*

POLICY STATEMENT

I. Based upon our criteria and assessment of the peer-reviewed literature, use of a metal-on-metal hip resurfacing device that has been approved by the United States Food and Drug Administration (FDA) has been medically proven to be effective and, therefore, is considered **medically appropriate**, when **ALL** of the following criteria are met:

A. The individual is age 64 years or younger;
B. Imaging shows **EITHER** of the following findings:
   1. Osteoarthritis or an inflammatory arthroplasty affecting **BOTH** the femoral head and the acetabulum, with joint space narrowing on weight-bearing radiographs; or
   2. Avascular necrosis of the femoral head with possible acetabular surface involvement and there is less than 50% involvement of the femoral head;
C. The individual has function-limiting pain at short distances (e.g., walking less than ¼ mile, limiting activity to two city blocks, the equivalent to walking the length of a shopping mall) for at least three (3) months duration.*
   *Criteria exception: Three (3) months of function-limiting pain is not required when the medical record clearly documents why provider-directed non-surgical management is inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia);
D. Loss of hip function which interferes with the ability to carry out age appropriate activities of daily living and/or demands of employment;
E. Failure of at least three (3) months of provider-directed non-surgical management.*
   *Criteria exception: Three (3) months of provider-directed non-surgical management is not required when the medical record clearly documents why provider-directed non-surgical management is inappropriate (e.g., collapse of the femoral head, inflammatory arthritis, advanced dysplasia).

II. Based upon our criteria and assessment of the peer-reviewed literature, total hip resurfacing has not been medically proven to be effective and, therefore, is considered **not medically necessary** for **ANY** other indication including but not limited to:

A. There is evidence of avascular necrosis of the femoral head involving more than 50% of the femoral head;
B. The individual is skeletally immature;
C. The individual has an active local or systemic infection;
D. There is evidence of vascular insufficiency, significant muscular atrophy of the hip or leg musculature, or neuromuscular disease severe enough to compromise implant stability or post-operative recovery;
E. The individual has Charcot joint;
F. The individual is undergoing dialysis and on a renal transplant list.

POLICY GUIDELINE

This policy does not address partial hip resurfacing involving resurfacing of only the femoral component.

DESCRIPTION

Total hip resurfacing is an alternative to watchful waiting or total hip arthroplasty for younger, active individuals with hip disease such as osteoarthritis, rheumatoid arthritis, or advanced avascular necrosis.

In total hip resurfacing, the surface of the femoral head is trimmed and covered with a hollow metal hemisphere that fits into a metal acetabular cup. It is believed to optimize stress transfer to the proximal femur, and, because of the large diameter of the articulation, to offer stability and optimal range of movement. Because resurfacing preserves proximal femoral bone stock, it may not compromise future total hip replacements.

Non-surgical management with regard to the treatment of hip osteoarthritis is defined as any provider-directed, non-surgical treatment that has been demonstrated in the scientific literature to be efficacious and/or that is considered reasonable care in the treatment of hip pain from osteoarthritis. Types of treatment may include but are not limited to: relative rest/activity modification, weight loss, supervised physiotherapy modalities and therapeutic exercises, oral prescription and non-prescription medications, assistive devices (e.g., cane, crutches, walker, wheelchair), and/or intra-articular injections (e.g., steroid).

RATIONALE

The Birmingham Hip Resurfacing Device (BHR), a metal-on-metal system, received FDA premarket approval in May 2006. The Cormet Hip Resurfacing system, another metal-on-metal system, received FDA premarket approval in July 2007. In March 2019, the FDA confirmed that there are two FDA-approved metal-on-metal hip resurfacing devices available (as identified).

Reports of long-term outcomes of metal-on-metal hip resurfacing are not available. However, evidence from numerous case series demonstrates symptomatic and functional improvements that appear to be comparable to those obtained with the current generation of total hip replacement in individuals younger than age 65 years at similar follow-up duration. In addition, because hip resurfacing leaves femoral bone stock intact, revision is technically similar to primary total hip replacement. Increased concentrations of metal ions have been documented after metal-on-metal hip resurfacing; however, the effects of this, if any, are not known. The effect of metal ion release on a fetus is also unknown.

There is minimal published medical literature regarding total HR using polyethylene components. More studies are emerging, investigating total HR as a treatment for developmental dysplasia of the hip (DDH). Outcomes of studies thus far are insufficient to determine the overall health outcome of HR in this patient-population (Li et al., 2009; Naal et al., 2009; McBryde et al., 2008).

In a 2019 retrospective cohort study, Inoue et al. compared post-operative complications and survivorship of total hip and knee arthroplasty in dialysis and renal transplantation patients. They included a total of 107 patients undergoing primary total joint arthroplasty, including 50 who were receiving dialysis and 57 who had a prior renal transplantation. The end point was defined as revision surgery secondary to post-operative complications. Researchers found a significantly higher rate of post-operative complications in the dialysis cohort (28%, n=14 of 50 joints), compared to the renal transplant cohort (7.1%, n= 4 of 57 joints). There was a higher rate of SSI and PJI in dialysis patients, compared with renal transplantation patients (18% versus 3.5%, P=0.02). In addition, there was an increased rate of revision surgery in the dialysis cohort, compared to transplant cohort (24% versus 3.5%, P=0.002). A multi-variate analysis considering

demographics and comorbidities revealed that patients with renal transplantation were less likely to have revision surgery, compared to patients on dialysis as the time of arthroplasty (95 % CI, P=0.031) and demonstrated a strong trend for lower complications (95% CI, P=0.76), although the latter was not statistically significant. Researchers concluded that transplantation was independently associated with reduced rates of revision surgery in the setting of chronic renal failure, suggesting that those who are candidates may benefit from renal transplantation before undergoing elective total joint arthroplasty.

CODES

- *Eligibility for reimbursement is based upon the benefits set forth in the member's subscriber contract.*
- *CODES MAY NOT BE COVERED UNDER ALL CIRCUMSTANCES. PLEASE READ THE POLICY AND GUIDELINES STATEMENTS CAREFULLY.*
- *Codes may not be all inclusive as the AMA and CMS code updates may occur more frequently than policy updates.*
- *Code Key: Experimental/Investigational = (E/I), Not medically necessary/ appropriate = (NMN).*

CPT Codes

Code	Description
No specific codes	

HCPCS Codes

Code	Description
S2118	Metal-on-metal total hip resurfacing, including acetabular and femoral components

ICD10 Codes

Code	Description
M16.0-M16.9	Osteoarthritis of hip (code range)
M87.050	Idiopathic aseptic necrosis of pelvis
M87.051-M87.059	Idiopathic aseptic necrosis of femur (code range)
M87.150	Osteonecrosis due to drugs, pelvis
M87.151-M87.159	Osteonecrosis due to drugs, femur (code range)
M87.250	Osteonecrosis due to previous trauma, pelvis
M87.251-M87.256	Osteonecrosis due to previous trauma, femur (code range)
M87.350	Other secondary osteonecrosis, pelvis
M87.351-M87.353	Other secondary osteonecrosis, femur (code range)
M87.850	Other osteonecrosis, pelvis
M87.851-M87.859	Other osteonecrosis, femur (code range)

REFERENCES

*Adrados M, et al. Institutional adherence to the American Association of Hip and Knee Surgeons body mass index guidelines lowers perioperative emergency department visits in primary total knee arthroplasty. J Arthroplasty 2023 Jun;38(6S): S88-S93.

*American Academy of Orthopaedic Surgeons (AAOS). Management of osteoarthritis of the hip evidence-based clinical practice guideline. Rosemont, IL: American Academy of Orthopaedic Surgeons; 2017:1-850.

*Amstutz HC, et al. Results of metal-on-metal hybrid hip resurfacing for Crowe type-I and II developmental dysplasia. JBJS – Am 2007 Feb;89-A(2):339-46.

*Amstutz HC, et al. Resurfacing THA for patients younger than 50 years – results of 2- to 9-year follow-up. Clin Ortho Rel Res 2007 Feb;89(2):339-46.

*Ball ST, et al. Early results of conversion of a failed femoral component in hip resurfacing arthroplasty. JBJS – Am 2007;89:735-41.

*Boyd HS, et al. Resurfacing for Perthes disease: an alternative to standard hip arthroplasty. Clin Orthop Relat Res 2007 Dec;465:80-5.

Browne J, et al. Peritoneal dialysis does not carry the same risk as hemodialysis in patients undergoing hip or knee arthroplasty. J Bone Joint Surg 2019;101(14):1271-77.

Dowsey MM, et al. Effect of bariatric surgery on risk of complications after total knee arthroplasty. JAMA Network Open 2022 Apr;5(4):e226722.

*FDA Medical Devices Metal on Metal Hip Implant Systems 3/2019. [https://www.fda.gov/medical-devices/metal-metal-hip-implants/metal-metal-hip-implant-systems] accessed 05/06/24.

Inoue D, et al. Comparison of postoperative complications and survivorship of total hip and knee arthroplasty in dialysis and renal transplantation patients. J Arthroplasty 2020;35(4):971-75.

*Li J, et al. Hip resurfacing arthroplasty for ankylosing spondylitis. J Arthroplasty 2009 Dec;24(8):1285-91.

Mancino F, et al. Metal-on-metal hips: Ten-year clinical and radiographic outcomes of the ADEPT metal-on-metal hip resurfacing and modular total hip arthroplasty. Journal Clinical Medicine 2023 Jan 22;12(3):889.

*McBryde CW, et al. Metal-on-metal hip resurfacing in developmental dysplasia. A case-control study. J Bone Joint Surg 2008 Jun;90(6):708-14.

*Mont MA, et al. Effect of changing indications and techniques on total hip resurfacing. Clin Orthop Relat Res 2007 Dec;465:63-70.

*Naal FD, et al. Outcome of hip resurfacing arthroplasty in patients with developmental hip dysplasia. Clin Orthop Relat Res 2009 Jun;467(6):1516-21.

*Naal FD, et al. High revision rate at 5 years after hip resurfacing with Durom implant. Clin Orthop Relat Res 2011 Sep;469(9):2598-604.

*Treacy RB, et al. Birmingham hip resurfacing: a minimum follow-up of ten years. J Bone Joint Surg Br 2011 Jan;93(1):27-33.

*Vendittoli PA, et al. A randomized study comparing resection of acetabular bone at resurfacing and total hip replacement. J Bone Joint Surg Br 2006 Aug;88:997-1002.

*Key Article

KEY WORDS

Hip Resurfacing

CMS COVERAGE FOR MEDICARE PRODUCT MEMBERS

Based on our review, Total Hip Resurfacing is not specifically addressed in National or Regional Medicare coverage determinations or policies.