

Musculoskeletal extremity imaging use among Medicare population climbs sharply

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Utilization rates among fee-for-service Medicare beneficiaries for the four most common musculoskeletal extremity imaging modalities - radiography, ultrasound, MRI, and CT - increased significantly between 1994 and 2013, according to an article published ahead of print in the *American Journal of Roentgenology (AJR)*.

Titled, "Changing Musculoskeletal Extremity Imaging Utilization From 1994 Through 2013: A Medicare Beneficiary Perspective," the AJR article showed that for the study period use of radiography grew by 43%, [ultrasound](#) use grew 500%, MRI utilization was up 615%, and CT use was up 758%.

All four primary [musculoskeletal](#) imaging modalities increased in utilization during the two-decade time period, with MRI experiencing an initial 15-year span of rapid growth followed by a plateau, whereas the other modalities grew more consistently across the full interval, the study said. Radiology was the most common billing specialty group for all modalities throughout the 20-year period, maintaining dominant market shares for MRI and CT. The physician office was the most common site of service for radiography, MRI, and ultrasound, whereas the hospital outpatient and inpatient settings were the most common sites for CT. The hospital outpatient department was the second most common location for the remaining imaging modalities.

"The reasons for this rapid growth could be related to the various advantages of ultrasound imaging, including improved accessibility,

portability, and low cost," the study reported. "However, a number of studies in the podiatry literature have touted ultrasound as a mechanism to enhance practice revenue, suggesting that this could be a dominant driver of this utilization change."

The study's authors, led by Soterios Gyftopoulos of the Department of Radiology at NYU Langone Medical Center, said that the comprehensive analysis of musculoskeletal extremity imaging ordering trends showed increases in both volume and per-beneficiary utilization for the four main imaging modalities.

"These insights may have implications for radiology practice leaders in making decisions regarding capital infrastructure, workforce, and training investments to ensure the provision of optimal imaging services for extremity musculoskeletal care," the article stated.

More information: Soterios Gyftopoulos et al. Changing Musculoskeletal Extremity Imaging Utilization From 1994 Through 2013: A Medicare Beneficiary Perspective, *American Journal of Roentgenology* (2017). [DOI: 10.2214/AJR.17.18346](https://doi.org/10.2214/AJR.17.18346)

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