Hidden Erosion of Medicare Part B Radiology Professional Payments: Inflation, Volume, and Case-Mix Effects, 2014–2023

Malik Aaron, BS[1], Laura Harper, MD[2], Richard Sharpe, MD, MBA[3] , Curtis L. Simmons, MD, MBA[4]

[1]Mayo Clinic Alix School of Medicine, Phoenix, AZ, [2,3]Mayo Clinic, Phoenix, AZ, Division of Breast Radiology, [4]Phoenix Children's, Phoenix, AZ, Division of Radiology

PURPOSE

To evaluate trends in Medicare Part B radiology utilization and professional reimbursement from 2014–2023, accounting for inflation, modality case mix, and Medicare Advantage (MA) enrollment.

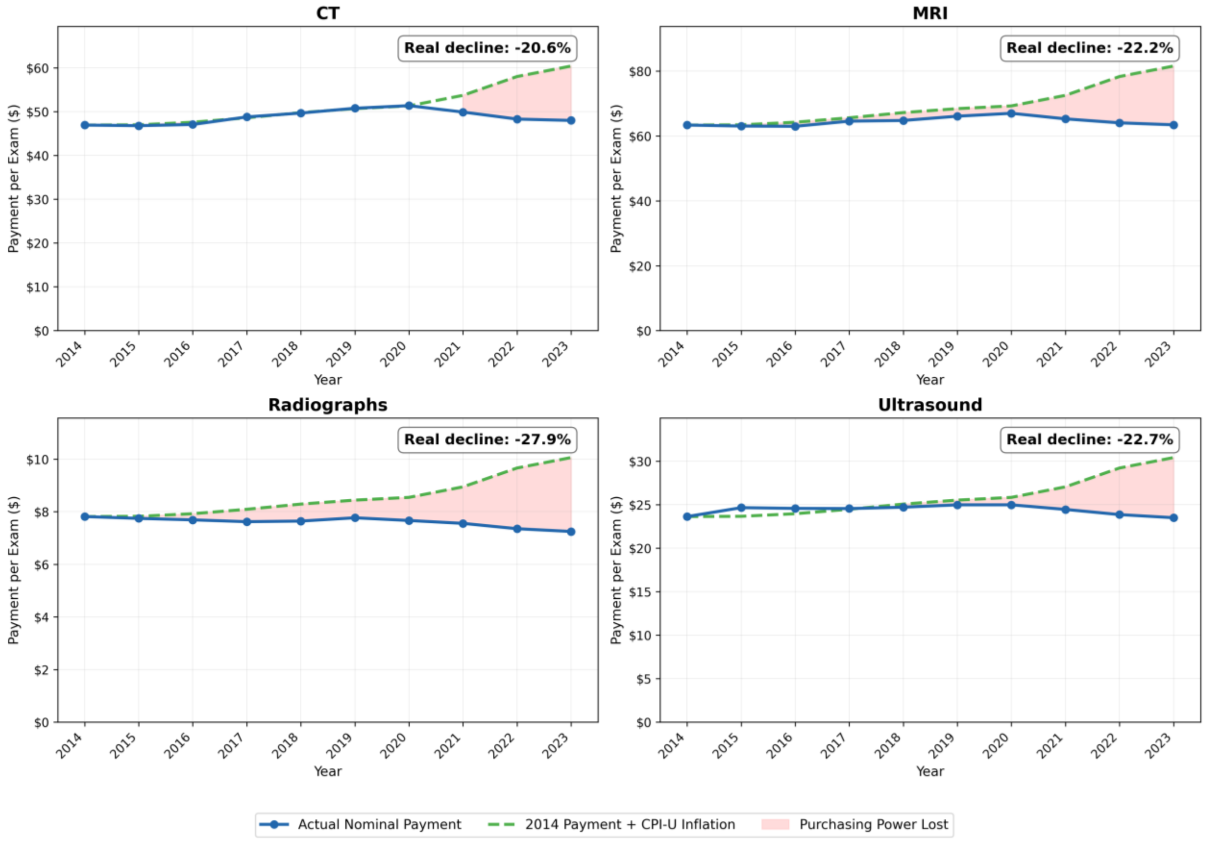
METHODS

Medicare Fee-for-Service (FFS) Part B non-institutional professional claims from 2014–2023 were extracted from the CMS Physician and Other Practitioners by Provider and Service dataset, restricted to radiology provider types (Diagnostic Radiology, Interventional Radiology, Nuclear Medicine) and facility place of service ("F") to isolate professional interpretation fees. CMS indicates facility-setting records generally represent the physician professional fee and exclude facility payments. Claims were grouped by imaging modality (CT, MRI, radiography, ultrasound, mammography, nuclear medicine, and interventional radiology).

From 2014–2023, MA penetration increased from 29.7% to 48.3% (FFS share 70.3% to 51.7%), so utilization was calculated as imaging services per 1,000 FFS enrollees using CMS Part B FFS enrollment as the denominator. Payments were summarized annually in nominal dollars and converted to 2023 dollars using the BLS Consumer Price Index-U. Changes in total payments from 2014 to 2023 were decomposed into inflation, volume, modality mix (holding inflation-adjusted 2014 rates constant), and per-exam rate effects. A sensitivity analysis converted office/non-facility global fees to professional-component equivalents.

GRAPHS AND FIGURES

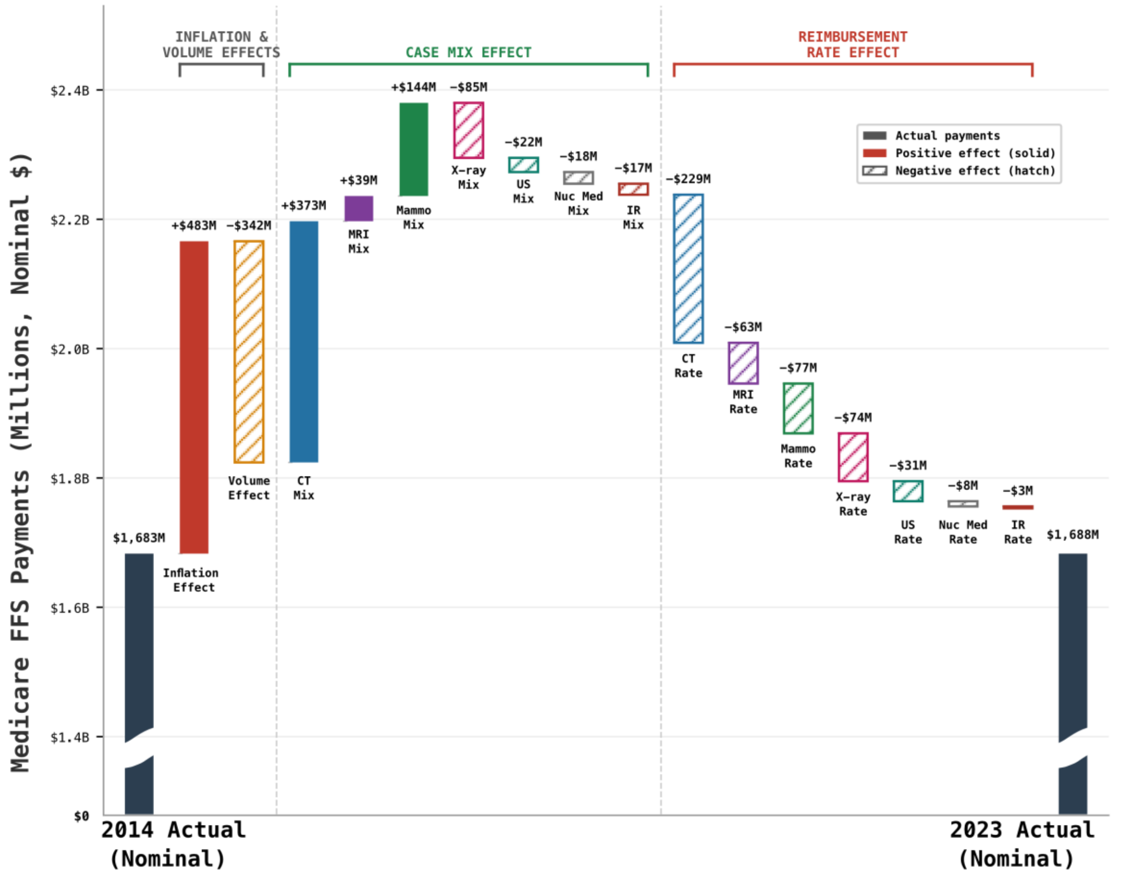
Figure 1. Inflation-adjusted erosion of Medicare Part B radiology payment per examination by modality, 2014–2023



Source: CMS Medicare Physician & Other Practitioners FFS Claims; BLS CPI-U for inflation adjustment

- Solid blue lines represent nominal Medicare professional payment per exam.
- Dashed green lines represent the inflation-adjusted value of 2014 payments if reimbursement had kept pace with CPI-U.
- Shaded areas indicate cumulative loss in purchasing power relative to the 2014 inflation-adjusted baseline.
- Across all four modalities, nominal payments remained flat while real purchasing power declined substantially; radiography (−27.9%) and ultrasound (−22.7%) show the largest real declines, with MRI (−22.2%) and CT (−20.6%) close behind.

Figure 2. Waterfall decomposition of changes in Medicare Part B radiology professional payments, 2014–2023



- Waterfall decomposition of the change in total Medicare Fee-For-Service Part B radiology professional payments from 2014 to 2023, shown in nominal dollars.
- The analysis separates the net change into effects attributable to inflation, overall imaging volume, modality case-mix shifts, and per-examination reimbursement rate changes. Case-mix effects reflect changes in the relative contribution of CT, MRI, radiography, mammography, interventional radiology, and other modalities, holding inflation-adjusted 2014 rates constant.
- Rate effects represent changes in inflation-adjusted payment per examination within each modality. **Despite positive contributions from inflation and modality mix, declining per-exam reimbursement resulted in a net erosion of real professional payments.**

RESULTS

As seen in Figure 2, total Medicare Part B radiology professional payments were essentially flat nominally ($1.68B to $1.69B, +0.6%) but fell $479M (−22.1%) below the 2014 inflation-adjusted benchmark, representing a substantial real decline. A professional-component-equivalent sensitivity analysis showed growth to $2.33B nominally, still $296M (−11.3%) below the inflation-adjusted benchmark. Per-capita CT utilization increased 29% (423.2 to 547.5 per 1,000) and mammography increased 59% (128.1 to 203.3 per 1,000), while MRI was essentially flat (+5%), radiography declined 27%, and ultrasound declined 18%. Although FFS imaging volume declined 15%, estimated total Medicare imaging volume rose approximately 17%. Case-mix shifts toward advanced imaging contributed +$41M, outweighed by −$469M from per-exam rate erosion. Figure 1 shows that inflation-adjusted payment per interpretation declined across all modalities — radiography showed the steepest erosion (−27.9%), followed by ultrasound (−22.7%), MRI (−22.2%), and CT (−20.6%).

CONCLUSIONS

Medicare Part B radiology professional payments have eroded substantially in real terms despite rising CT and MRI utilization and increasing overall imaging demand. Nominal payment growth obscures inflation-adjusted declines in payment per examination, intensifying workload pressures and challenging long-term practice sustainability.

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