ORIGINAL ARTICLE

The Shift in Outpatient Advanced Imaging From Private Offices to Hospital Facilities

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Abstract

Purpose: To study recent outpatient imaging trends in private offices and hospital outpatient departments (HOPDs), to determine if shifting between the two has occurred. Concern is currently focused on whether reduced reimbursements and other factors might lead to a shift to higher-cost HOPDs.

Methods: The nationwide Medicare Physician/Supplier Procedure Summary Master Files for 2001 to 2013 were studied. All Current Procedural Terminology codes for MRI, echocardiography, nuclear medicine, ultrasound, and CT were selected, and procedure utilization rates per 1,000 Medicare beneficiaries were determined for each year. Medicare location codes identified the settings where the scans were performed.

Results: Total utilization rates, per 1,000 beneficiaries, of all these examination types in private offices, grew from 478 in 2001, to 874 in 2008 (+83%), and then declined to 503 in 2011 (−42%), primarily as a result of code bundling. No further bundling occurred in 2012 or 2013, but the decline continued in those years, to 462. In HOPDs, the total rate rose from 416 in 2001, to 523 in 2008 (+26%), followed by similar bundling-related declines, to 418 (−20%) in 2011. But in 2012 and 2013, in contrast to private office trends, the HOPD rate increased to 447. The ratio of private office to HOPD advanced imaging was 1.67 in 2008, declining to 1.03 in 2013. In addition, individual modality shifts away from offices and into HOPDs were quite apparent.

Conclusions: In recent years, a shift has occurred in utilization of all advanced imaging modalities, from private offices to HOPDs. This change could portend a loss of access for patients and an increase in costs.

Key Words: Medical economics, imaging utilization, advanced imaging, radiology and radiologists, socioeconomic issues

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INTRODUCTION

In the early and middle portion of the past decade, imaging was recognized as the most rapidly growing of all physician services [1]. As a result, CMS has cut medical imaging reimbursements more than a dozen times since 2006 [2]. Two of the most important cuts to imaging were the Deficit Reduction Act (initiated in 2007) and the bundling of certain high-volume Current Procedural Terminology, version 4 (CPT-4) codes for various procedures [3]. Code bundling is the process by which existing CPT codes that cover multiple services are combined into a single code that covers all of those services [4-7]. In virtually all instances, these new bundled codes have lower relative value units, compared with the sum of the previously unbundled codes.

One of the first instances of major code bundling was for echocardiography in 2009 [8]. Before that year, the large majority of claims for transthoracic echocardiograms were accompanied by additional codes for color-flow Doppler and spectral Doppler echocardiograms. Beginning in 2009, CMS required the use of a single, new code when those three studies were done together. Another major bundling of codes occurred in 2010, this time affecting radionuclide myocardial perfusion imaging [9]. Before that year, most such claims included a primary code for the category plus two add-on codes for left ventricular wall motion and left ventricular ejection fraction. Beginning in 2010, only a single new code could be used for any or all of the three studies when they were done together. Finally, in 2011, the codes for CT of the abdomen and CT

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of the pelvis were bundled. Previously, two separate codes could be claimed when they were done together (as they usually were). Beginning in that year, only a single new code could be used if they were done together.

Medicare reimbursement for private offices is based on the Physician Fee Schedule in the Deficit Reduction Act, whereas that for HOPDs is based on HOPPS. In 2007, the Deficit Reduction Act capped the technical component of the Physician Fee Schedule at that of the HOPPS rate for the same service when the former was higher. Because of the complex formula used to reimburse hospitals under HOPPS, the technical-component reimbursement for a service performed in an HOPD is always higher than or equal to that for the same service performed in a private office [3,10].

A logical concern was that reduced reimbursements might render certain services financially unfeasible to perform in private offices, and thereby lead to closures of offices and a shift to higher-cost HOPDs [11]. Given this context, the purpose of the current study was to analyze recent outpatient imaging trends in private offices and HOPDs to determine if any shifting between the two has occurred. If so, this trend would be unfavorable from the perspective of Medicare and other payers.

METHODS

The data sources were the Medicare Part B Physician/Supplier Procedure Summary Master Files for 2001 through 2013. These files provide Medicare procedure volume and other administrative data for every CPT-4 code. They cover all individuals in traditional fee-for-service Medicare but not those in Medicare Advantage plans. We selected all MRI, echocardiography, nuclear medicine, noncardiac ultrasound, and CT procedure codes for analysis. Procedure volumes were determined by counting global and professional component claims, but not technical-component–only claims, because that would have led to double counting. We included only noninvasive diagnostic imaging studies. Interventional procedures were excluded. In nuclear medicine, we included only nuclear imaging studies but not the various nonimaging tests of physiologic function.

We used Medicare's place-of-service codes to identify outpatient studies performed in either private offices or HOPDs. Private office data include offices owned both by radiologists and nonradiologist physicians. Studies on inpatients and emergency department patients were not included. The number of fee-for-service Medicare beneficiaries each year was determined from the CMS Medicare Advantage State/County Penetration reports. From this value, we calculated utilization rates per 1,000 beneficiaries. We compared the utilization rate trends in private offices with those in HOPDs. Data analysis was performed using SAS version 9.3 for Windows (SAS Institute Inc, Cary, North Carolina).

RESULTS

The overall trends for all advanced imaging modalities together are shown in Figure 1. Total utilization rates per 1,000, of all advanced imaging examinations performed in private offices, grew rapidly, from 478 in 2001 to 874 in the peak year of 2008 (+83%). The rate then declined sharply to 503 in 2011 (−42%), primarily as a result of code bundling—for echocardiography in 2009, nuclear cardiac examinations in 2010, and CT of the abdomen/pelvis in 2011. No further bundling occurred in 2012 or 2013, but the decline continued in those years from 503 to 462. In HOPDs, the total rate rose from 416 in 2001

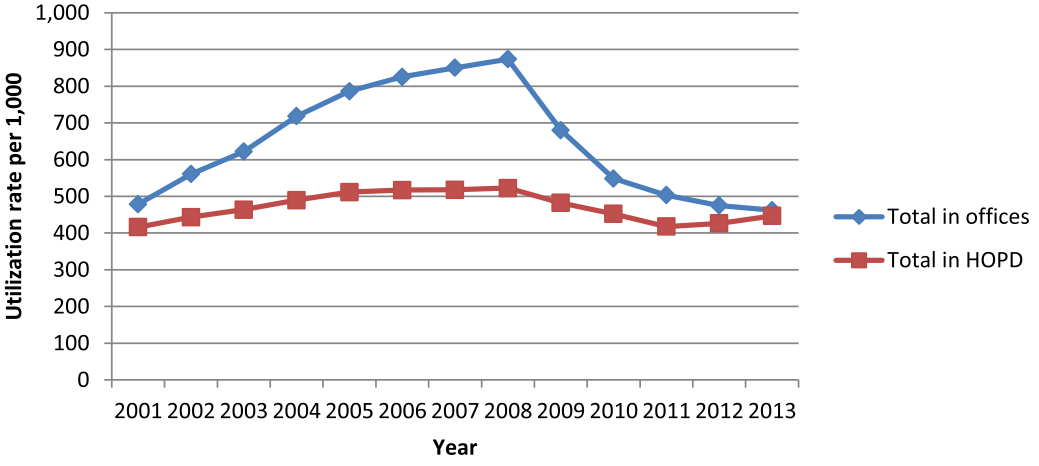

Fig 1. Overall trends in Medicare outpatient utilization of advanced imaging. HOPD = hospital outpatient departments.