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Clinical Study

Facet injection trends in the Medicare population and the impact of bundling codes

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Abstract

BACKGROUND CONTEXT: Interventional spine procedures have seen a steady increase in utilization over the last 10 to 20 years. In 2010, the Current Procedural Terminology (CPT) codes for facet injections were bundled with image guidance (fluoroscopic or computed tomography) and limited billing to a maximum of three levels. This was done in part because of increased utilization and to ensure that procedures were done appropriately with image guidance.

PURPOSE: The study aimed to evaluate if the CPT code changes correlated with a decreased utilization of facet injections.

STUDY DESIGN: This is a retrospective time series study.

PATIENT SAMPLE: The sample was composed of 100% Medicare Part B claims submitted for facet joint injections from 2000 to 2012, as documented in the Centers for Medicare & Medicaid Services (CMS) Physician Supplier Procedure Summary (PSPS) master files.

OUTCOME MEASURES: Procedure numbers and trends were the outcome measures.

METHODS: The trends of facet injections were analyzed from 2000 to 2012 using the CMS PSPS master files. The total number of lumbosacral and cervical-thoracic facet injections was noted. Changes over those years were calculated with specific attention to 2010, when CPT were bundled with image guidance and injections were limited to no more than three levels. Also, to account for the growth in the Medicare population, a calculation was done of injections per 100,000 Medicare enrollees. No funding was used for this study.

RESULTS: Facet injection utilization increased from 2000 to 2012, with an average growth rate of 11% per year for lumbosacral facet injections and 15% for cervical-thoracic facet injections (per 100,000 Medicare enrollees). The largest growth occurred from 2000 to 2006 (25% growth per year for lumbosacral and 32% for cervical-thoracic injections per 100,000 Medicare enrollees) and this leveled off from 2007 to 2012 (−3% growth per year for lumbosacral and −2% for cervical-thoracic injections per 100,000 Medicare enrollees). The biggest drop in these procedures was in 2010, when there was a drop of 14% for lumbosacral facet injections and 15% drop for cervical-thoracic facet injections (per 100,000 Medicare beneficiaries).

CONCLUSIONS: Facet injection utilization notably increased from 2000 to 2006 but began to level off from 2007 to 2012. The most notable drop was in 2010, which correlated with the release of new CPT codes that bundled image guidance and limited procedures to three levels or less.

Keywords: Bundling; Cost; CPT; Facet injections; Medicare; Utilization

FDA device/drug status: Not applicable.

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Introduction

Low back pain (LBP) is a common problem, with over 80% of the population experiencing an episode of LBP during their lives [1]. Data from the Centers for Disease Control and Prevention's 2010 National Health Interview Survey found that 29% of interviewees had experienced LBP at some point during the previous 3 months [2]. A global review of the prevalence of LBP in the adult general population was published in 2012 showing a point prevalence of 11.9% and a 1-month prevalence of 23.2% [3]. There are also reports that the prevalence of LBP may be growing among adults [4] and children [5].

With this high prevalence and reports that the problem may be growing, the cost of back pain has been significant. The national economic cost with chronic pain was estimated at $560 billion to $635 billion in 2010 dollars [6,7], with chronic LBP contributing significantly to this cost. The cost of chronic pain, not limited to LBP, is greater than the annual costs of heart disease ($309 billion), cancer ($243 billion), and diabetes ($188 billion) [6,7]. Moreover, LBP is cited as the leading cause of disability globally [8].

Given how common chronic pain is, many modalities have been used to treat it, including interventional pain and spine procedures. These interventional procedures have seen a steady increase in utilization over the last 10 to 20 years, as documented in the Medicare population [9–13]. The estimated costs of spinal procedures (epidurals, facet, and sacroiliac joint procedures) were over $362 million in 2000 and over $1.2 billion in 2008 [10]. Specific Medicare data on facet injections have shown an increase from $141 million in 2003 to $307 million in 2006 [14,15].

In 2010, the Current Procedural Terminology (CPT) codes for facet injections were bundled with image guidance. This made it mandatory to use image guidance (fluoroscopic or computed tomography) if doing these procedures and also limited the billing to a maximum of three levels. This was done in part because of increased utilization and to ensure that procedures were done appropriately with image guidance. This study looks to evaluate if these new CPT codes correlate with a decrease in procedure utilization.

Materials and methods

The trends of facet injections were analyzed from 2000 to 2012 using the Centers for Medicare & Medicaid Services (CMS) Physician Supplier Procedure Summary (PSPS) master files. The PSPS master files aggregate 100% of Medicare Part B claims submitted by physicians and other providers. The data were retrospectively compiled for public use, without individual patient or encounter-specific information, exempting this analysis from institutional review board oversight.

Facet injections included in this study consist of intra-articular injections and diagnostic medial branch blocks, which share the same CPT codes. Before 2010, the lumbosacral facet injection CPT codes were 64475 (lumbosacral facet injection) and 64476 (additional levels). Also, before 2010, CPT code 77003 was used if image guidance (fluoroscopic or computed tomography) was utilized. Image guidance is necessary to perform these procedures correctly, but it was not always used. Starting in 2010, the new CPT codes that bundled lumbosacral facet injections with image guidance were 64493 (facet injection lumbosacral), 64494 (second injection level), and 64495 (third injection level). This made it mandatory to use image guidance and limited injections to three levels.

In a similar fashion, before 2010, the CPT codes for cervical-thoracic facet injections were 64470 (cervical-thoracic facet injection) and 64472 (additional levels). CPT code 77003 was also used to document image guidance. From 2010 onward, the new CPT codes that bundled cervical-thoracic facet injections with image guidance were 64490 (cervical-thoracic facet injection), 64491 (second injection level), and 64492 (third injection level).

The total number of lumbosacral and cervical-thoracic facet injections performed on Medicare fee-for-service enrollees was calculated for each year from 2000 to 2012. All provider specialties and locations of service were included in the analysis, including ambulatory surgery centers, hospital outpatient department, and the office setting. The percent change in facet injections between each year was also calculated. Given that the Medicare beneficiary population changes from year to year, we calculated the number of facet injections per 100,000 Medicare enrollees and the associated percent change for each year using annual CMS enrollment data [16].

EVIDENCE & METHODS

Context

The authors sought to evaluate the performance of facet injection procedures over the course of the last decade using Medicare claims data.

Contribution

The authors report that the performance of facet injections increased between 2000 and 2006 but then began to plateau in the years 2007–2012. The most notable change per the authors was in the year 2010, which correlated with the introduction of new CPT codes that bundled image guidance and limited the performance of procedures to three levels or less.

Implications

Readers should appreciate that findings from this study are limited to the Medicare population and may not reflect these procedures received by patients insured through other means. While the findings are clearly of interest, the appropriateness of such interventions cannot be assessed through such nonclinical claims-based data. Thus, even in the current state, overuse or inappropriate use of these injection procedures may still be occurring. Their sensitivity to changes in reimbursement is clearly a cause for concern.

—The Editors