A SYSTEMATIC LITERATURE REVIEW OF ECONOMIC STUDIES AND A COST ANALYSIS RELATED TO EPIDURAL STEROID INJECTIONS IN THE ELDERLY

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Background

The management of low back pain due to spinal stenosis is variable, complex, and even controversial.

Epidural steroid injections (ESI) are a common intervention despite inconclusive and limited evidence.

Assessing utilization, costs and reimbursement for existing treatments for low back pain, such as ESI, are important and will guide future economic evaluations.

Objective

To systematically appraise published literature for economic evaluations of ESIs for lumbar spinal stenosis.

To assess utilization and estimate Medicare reimbursement for ESI.

Methods

Literature Review

PubMed was searched through June 2011 for key words pertaining to low back pain, spinal stenosis or sciatica, and ESI.

We included observational studies with cost outcomes.

Institutional Analysis

We assessed utilization associated with ESI using data on all Medicare beneficiaries receiving an ESI at our institution from 12/28/2009 - 12/20/2010.

- Number of patients, number of ESI visits per patient, and days between episodes were calculated to describe utilization (Table 1)
- Frequency of common service items occurring during an ESI were tabulated (Table 2)
- 2010 Northwest Medicare reimbursement amounts were applied to estimate CMS payments for service items
- Reimbursement amounts for an ESI and frequently associated service items were summed to create total estimates for ESI episodes (Table 3)

Results

Friedly et al. 2007

- Rates of lumbar ESI increased 271% from 1994 to 2001 in Medicare beneficiaries.
- Professional charges per injection nearly doubled from $115 to $227 during this period.

Manchikanti et al. 2010

- Rate of lumbar epidurals was 67% higher in 2006 versus 2002 in Medicare beneficiaries of any age
- Allowed charges for all spine epidural injections increased from $336 to $395 from 2002-2006.

Discussion

- The limited number of economic analyses show that utilization and charges for ESI are continue to increase.
- ESI utilization at our single institution may not generalize well as the use of ESI has been shown to have substantial geographic variation.
- Medicare reimbursement amounts will vary by location as well.

Sponsored by AHRQ* R01 HS019222-01

*Agency for Healthcare Research and Quality (AHRQ)

Prepared for ISPOR, 17th Annual International Meeting (June 2012)