Integrating Epidemiological Information into MRI Reports Reduces Ensuing Radiologic Testing Costs Among Patients with Low Back Pain: A Controlled Study

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Research has demonstrated that including epidemiological data (percentages of asymptomatic patients, by age group, with imaging changes on MRI such as degenerative disc, bulging disc, herniated disc, annular fissures, etc.) along with the standard MRI results report has resulted in reduced opioid prescribing by the provider who ordered the study, as well as reduced referral to spine specialists. This new study includes an assessment of costs when frequency of common findings are included with the standard MRI results report. The epidemiological information sheet included data on the prevalence of certain conditions over each decade of life in asymptomatic individuals. For example, degenerative disc disease findings in asymptomatic patients are seen in 68% in those 40-50 years of age, 80% in those 50–60, 88% if 60-70, and 93% if 70-80. Again, these are in asymptomatic persons.

In this study, MRI reports with the addition of the prevalence of common findings triggered a downstream costs savings averaging $330 per report when compared to the standard MRI results report of the control group (no epidemiological chart included). Repeat MRI use, spinal injection, opioid use and surgery all decreased in the study group compared to the control group, while muscle relaxers and chiropractic utilization had a slight increase. One explanation for these findings is that the common language used in spine imaging reports, without statistical reference, is both fear invoking and inappropriately supportive of a pathoanatomical understanding of back pain, as compared to the more clinically sound biopsychosocial model.

Other Associated Imaging References:

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