Introduction:

Reimbursement for magnetic resonance spectroscopy (MRS) has been a topic of significant concern to the scientific and clinical medical community. Contrary to popular belief, CPT 76390, the current procedural terminology code (CPT-4) for MRS, is actively reimbursable. Much of the reason why MRS is thought to be non-reimbursable is due to recent announcements by Medicare and Blue Cross that this 15 year-old technique is still considered “investigational”. A review of the history of CPT 76390 demonstrates that this is not the first time this issue has appeared and yet reimbursement has not dropped significantly in the past five years. An up-to-date analysis of reimbursement rates and a discussion of current billing strategies will demonstrate that MRS is still highly reimbursable.

History of CPT 76390:

MRS first received Food and Drug Administration (FDA) approval in 1992 followed by automated MRS sequences (PROBE) in 1995. It is widely available on any current clinical MR system and provides a non-invasive diagnostic tool of assessing brain metabolite concentrations. In 1998, Dr. Victor Haughton and his colleagues applied and received a CPT-4 code necessary for the billing of MRS: CPT 76390. A review of Health Care Financing Administration (HCFA, the federal agency that administers the Medicare system) coding for CPT 76390 revealed that from Nov 1, 1999 to Nov 1, 2001, CPT 76390 was an acceptable, non-investigational code that received reimbursement. At this time, reimbursement for spectroscopy was at an all-time high.

In 2001, several issues arose that suddenly placed CPT 76390 in the spotlight. Anthem (Blue Cross Blue Shield of Virginia) ruled that MRS was investigational based on an antiquated study from 1996 with few references from the current literature at that time. The American College of Radiology (ACR) responded to the ruling but with no response from Anthem. In December 2001, ACR made a formal request for national coverage of spectroscopy to Centers for Medicare and Medicaid Services (CMS; formerly known as HCFA). During the same month, rumors emerged that CPT 76390 had been removed as a CPT code. A closer examination of that issue revealed that CMS had merely removed MRS from self-referral category, and that the CPT code still exists and was actively being reimbursed.

The Agency for Healthcare and Research Quality (AHRQ) Technology Assessment by Jordon et al (Tufts University) proved to be disastrous to the ACR strategy. This study, commissioned by both the ACR and CMS concluded that spectroscopy was still an investigational tool using evidence-based medicine (EBM) criteria. Two months later, the Kaiser Permanente internal review was made public in conjunction with a Blue Cross Blue Shield (BC BS) technology assessment by Mark et al, arrived at the same conclusion. This resulted in nationwide memos released to all Medicare providers and BC BS providers that MRS was investigational and would no longer be covered after January 2004.

Current State of Reimbursement:

One would imagine that with all of these technology assessment memos that reimbursement for CPT 76390 would have dropped to record lows in 2004. Surprisingly, this was not the case. In fact, quite the opposite occurred: Medical fees assessed for CPT 76390 in 2003 demonstrated that the 90th percentile of providers of this service was billing $1,518 for each exam. In 2005 (reflective of 2004), medical fees had risen to $1,780 per exam and currently the 2008 medical free for spectroscopy is at $2,041. Arguably these are medical fee rates and not necessarily reflective of actual reimbursement. It has been observed that the reimbursement rates have not significantly changed with a value of 12.33 in 2003 and currently set at 12.35 which is equivalent to $470. Furthermore, we have conducted a survey of reimbursement for CPT 76390 from medical billers from across the country and have found that the average rate of reimbursement is $587.49.

Clearly, spectroscopy is still reimbursable and in fact a position statement from the Cigna Healthcare states: “Although supporting data are lacking in the form of well-designed, large-population, multi-center controlled clinical trials, results reported from a number of small case series and trials, as well as information in review literature, indicate that MRS has become standard of care as an effective imaging technique for the diagnosis, treatment and monitoring of patients with brain lesions.” This position statement takes into account both the ARHQ and BC BS technology assessments and still considers MRS reimbursable for brain tumor diagnosis. Currently other clinical indications for MRS are not as well supported however it has been our experience that other clinical indications such as Alzheimer’s disease diagnosis are reimbursed for MRS.

It is important to note however that one must adopt a proactive reimbursement strategy. First, it is common that initial billing submissions will be rejected by the payers. These rejections must be challenged and it is important to educate the payer that value and medical necessity of MRS in each case. Second, spectroscopy should not be a one to two line “add-in” to a radiology report, a separate report should be issued which clearly indicates the diagnostic value of the MRS exam and provides quality assurance and a comparison of normal age-matched metabolite levels. Finally, high quality data acquisition and reproducible spectroscopy protocols for disease diagnosis are critical for maintaining excellence to ensure billing reimbursement.

Conclusion:

Magnetic resonance spectroscopy is actively reimbursed for CPT code 76390 and should not be abandoned in clinical practice for simply financial reasons. Active support for critical spectroscopy must come from the scientific, clinical, and manufacturer community to ensure that this remains the case for the future.