



## Center for Healthcare Research & Transformation

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### DEMONSTRATION PROJECT:

### Encouraging Appropriate and Judicious Use of High Technology Radiology for Patients with Low Back Pain

#### Case

Diagnostic imaging has resulted in significant improvements in quality of care. At the same time, there is concern that this advanced technology is used more than needed. Outcome studies in patients with low-back pain have found imaging may improve physician confidence regarding patient diagnoses, but without any actual effect on patient treatment or clinical outcome. There are increased risks for patients, including radiation exposure, reactions to IV contrast material, and effects of false-positive interpretations. Evidence exists that costly imaging services are variably used and often provided to patients early in the course of benign low back pain before they can contribute meaningfully to care management, sometimes leading to excess cost and unnecessary invasive intervention<sup>1</sup>.

The national trend of increased utilization and cost of high technology imaging is occurring in all states. The costs for diagnostic radiology for Blue Cross Blue Shield of Michigan (BCBSM) increased from \$672 million in 2004 to \$763 million in 2006. High tech imaging services accounted for 72 percent of the BCBSM PGIP imaging services spending<sup>2</sup>. Given the high cost and high use of imaging and the potential risk to patients steps should be taken to ensure that high-technology radiology procedures are used appropriately and judiciously.

#### Project summary

In partnership with Blue Cross Blue Shield of Michigan (BCBSM) and the University of Michigan Health System (UMHS), the Center for Healthcare Research & Transformation (CHRT) will conduct a demonstration project to test whether it is possible – without compromising patient outcomes – to moderate the use of high tech imaging services for patients with acute low back pain and avoid the excess cost and potentially negative patient outcomes associated with over-utilization of high technology scanning, through the use of:

- Physician education
- Patient education
- Financial support to physicians for their participation and engagement in the demonstration project.

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<sup>1</sup> JAMA 2003. Volume 289:2810-18 . Jarrvik, J.G.

<sup>2</sup> These Michigan data are not member adjusted, but reflect total spending.

## Objectives

The objectives of the study are to demonstrate for the participants in the study compared to a control group:

- Lower rates of high technology radiology services for low back pain, measured by claims data.
- High levels of patient satisfaction (with the treatment decision as well as the process of decision making), measured by a patient satisfaction survey.
- Cost savings across participating physician groups attributable to a reduction in use of high-technology radiology, as measured by claims data.

## Interventions

- **Physician Education:** The physician population will consist of physician groups that participate in Blue Cross Blue Shield of Michigan's physician group incentive program<sup>3</sup> (PGIP). Participation in this demonstration project will be voluntary. CHRT will (1) provide to participating PGIP groups a "Physician Toolkit," including educational materials and a guidelines-based preauthorization template; (2) provide data to physicians regarding variations across PGIP groups in rates of use of CT and MRI scans among patients with low back pain; and (3) engage PGIP group leaders to help design an approach to educate their physicians regarding the appropriate management of patients with low back pain.
- **Patient Education:** The patient population will consist of adult patients of participating physicians who present during the study with new episodes of low back pain (lasting less than four to six weeks<sup>4</sup>) that could be treated with medications and/or physical therapy/exercise. CHRT will (1) provide to participating PGIP groups a "Patient Toolkit", which may include written and online patient education and or shared decision making materials. The PGIP groups will help design the intervention strategy, including the process and approach to using the tools.

## Proposed Timeline

The study is anticipated to begin in the summer of 2008 and will be conducted and written within two years with a target for completion in approximately 18 months.

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<sup>3</sup> PGIP connects physician groups across Michigan and encourages collaboration and information sharing in order to measure and monitor care quality, improve systems of care, and effectively manage patients with chronic diseases. Because PGIP creates health care cost savings, BCBSM offers financial incentives to reward physicians for their progress as they focus on improving chronic illness care, prescribing patterns and patient participation in clinical programs.

<sup>4</sup> Four to six weeks is used here but the final study design may allow for up to 12 weeks.