

A Quality Improvement Project to Inform Chiropractic Clinical Decision Making in the Use of Diagnostic Radiology



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About American Specialty Health

- Specialty healthcare benefits management company
- Based in San Diego, California
- 700 employees
- Provides health benefits for more than 14 million Americans
- *Mission:* To empower people to live healthier and longer lives



The Project Team

- Leaders
 - Chief Health Services Officer
 - Research Director
- Others
 - Vice President, Health Services
 - Vice President, Clinical Services
 - Director, Health Services Analytics
 - Director, Clinical Quality Management
 - Senior Manager, Clinical Quality Management
 - Clinical Services and Health Services support staff



The Problem

- Doctors of chiropractic form the third-largest healthcare discipline in the U.S. American Specialty Health (ASH) contracts with 15,000 of those doctors to deliver healthcare services to members of the health plans offered by ASH.
- Chiropractors have used X-ray examinations as a common practice in the diagnosis of musculoskeletal and spine-related conditions; however, evidence indicates X-ray exams are not necessary in the vast majority of cases.
- ASH implemented a quality improvement (QI) project to educate doctors and manage the reimbursement for unnecessary X-ray exams.
- Not only are unnecessary X-ray exams costly, but they present HIGH RISKS for patients. X-ray exams should only be performed when there is clear evidence of the need for this type of exam.
- This 13-year project has won national awards and recognition due to its significant success at changing doctor behavior while maintaining a safe and highly satisfied patient population.



Project Goals

- Population: 15,000 doctors of chiropractic
- Duration: 13 years
- Goal: Reduce number of unnecessary X-ray exams
- Baseline: 72% of patients received an x-ray exam
- Current: 9% of patients receive an x-ray exam
- Reduction in X-ray use reduced cost, reduced risk to patients, and did not negatively affect the quality or outcomes of treatment provided:
 - 96% of patients indicate treatment services resolved their conditions
 - 94% indicate satisfaction with treatment services provided (satisfaction has been 94% or higher the entire time the project has been under way)



Root Cause Analysis

- Until recently, clinical logic and intuition viewed spinal pain as primarily a problem arising from the structural elements of the spine: vertebra, ligaments, discs, etc. Spinal pain was believed to derive primarily from:
 - Degenerative or proliferative changes to vertebral elements
 - Degenerative changes to the intervertebral disc
 - Possibly more severe pathological processes such as infection or neoplasm
- This understanding logically led to the belief that the essential diagnostic component in the evaluation of spinal pain was diagnostic imaging, either with plain-film X-ray or with advanced imaging techniques.
- This imaging would either identify structural changes as described above or rule them out, leading to the conclusion that the spinal pain was predominantly muscular/soft tissue in origin.



Root Cause Analysis

- The question of when to use of X-rays in back pain cases is additionally complicated in the chiropractic profession.
- As well as using radiographs to identify and diagnose specific pathologies as described above, many chiropractors maintain that spinal X-rays should be used to perform a biomechanical analysis of the spine.
- Such analyses might be used to identify postural defects of the entire spinal column or to identify mal-alignments between adjacent vertebra.
- Chiropractors who use these types of biomechanical analyses argue that the information gained will alter treatments (e.g., location and type of manipulation performed) accordingly.



Root Cause Analysis

- Three developments in the scientific understanding of back pain have overturned this model:
 1. There is the understanding that in the absence of specific clinical findings (as derived from the history and physical/neurological exam), there is very little likelihood of back pain being caused by severe pathology, and in such cases plain-film radiographs are unlikely to be diagnostic.
 2. The clinical phenomenon of back pain is known to be much more complex than the structural/mechanical model followed by many chiropractors.
 3. It is now understood that many seemingly relevant radiographic findings (such as degenerative and arthritic changes or changes in intervertebral discs) cannot be assumed to be causally related to the clinical phenomenon of back pain, and these changes, when present, usually provide no usable information to the clinician.



Addressing Root Causes

- **Key causal drivers identified by root cause analysis:**
 - Lack of evidence-based guidelines
 - Lack of evidence-based education for practitioners
 - Lack of practitioner knowledge and commitment to evidence-based practices
 - Lack of practitioner buy-in about changing entrenched healthcare decision making
- **Practices implemented to address root causes:**
 - Guidelines development
 - Practitioner education
 - Utilization management oversight
 - Credentialing and practice protocol oversight
 - Quality management oversight



Addressing Root Causes

Guidelines Development

Technology Assessment Clinical Consensus Committee (TACCC)

- Central to ASH efforts to develop and implement the highest clinical standards for its provider network.
- Purpose:
 - To develop a set of criteria, definitions, and processes that will inform the clinical decision making within American Specialty Health Affiliates clinical management system and elevate the level of rigor, precision, predictability, and transparency of the ASHA clinical policymaking processes.
 - Further, to apply these criteria, definitions, and processes in the evaluation of specific diagnostic and therapeutic procedures.
- Composed of an expert panel representing the disciplines of clinical epidemiology, health services research, and the basic sciences, as well as full-time private practitioners. Precise membership will vary depending upon the issues under consideration.



Addressing Root Causes

Credentialing

- ASH credentialing and re-credentialing processes identify providers who meet or exceed professionally recognized standards within the provider community.
- Providers are not listed in a directory or authorized to treat ASH members until they have completed the entire credentialing process.
- ASH clinical peer review committees develop and approve credentialing criteria specific to each specialty.
- An ASH credentialing review includes primary verification of the following:
 - Education from an accredited educational institution
 - Professional liability (malpractice) history and insurance limits
 - Current status of the professional license and any actions against the license
 - Actions by Medicare and/or Medicaid agencies



Addressing Root Causes

Credentialing (continued)

- To identify providers who understand evidence-based healthcare, the process evaluates the clinical procedures and techniques used by providers.
- Provider performance is evaluated against established criteria, including both utilization and quality measures.
- ASH has identified key indicators of clinical quality and has embedded these in the ASH credentialing/privileging process.
- Examples of chiropractic quality assessment criteria include:
 - Frequency of X-ray evaluation
 - Frequency of full spine X-ray
 - Use of unacceptable or investigational techniques
 - Type of diagnostic examination protocols
- Providers who indicate that they use questionable techniques or other practices are further queried as to:
 - Their education and training in the technique/practice
 - What information they gain from its use
 - How often they use it and whether they intend to use it again
- A clinical peer review committee assesses the information to make the most clinically sound decision regarding the provider's participation with ASH.



Return on Investment

The principal return on investment is measured in terms of improved quality of care as reflected in more appropriate use of X-rays for management of back pain. A summary of the results is shown below. The California rate represents a quality benchmark of appropriate care.

	2003	2004	2005	2006
<i>California</i>				
Unique Patients	198204	277259	283067	282004
X-ray Studies	16272	26682	26484	26545
Rate per thousand	82	96	94	94
<i>National</i>				
Unique Patients	354655	482380	509237	473766
X-ray Studies	37845	56469	54826	48905
Rate per thousand	107	117	108	103
<i>National/Not CA</i>				
Unique Patients	156451	205121	226170	191762
X-ray Studies	21573	29787	28342	22360
Rate per thousand	138	145	125	117
<i>Georgia</i>				
Unique Patients	14472	23634	24712	25147
X-ray Studies	5256	8025	6975	6442
Rate per thousand	363	340	282	256
<i>Washington</i>				
Unique Patients	3392	4542	3426	3868
X-ray Studies	485	694	398	439
Rate per thousand	143	153	116	113

Monitoring and Evaluating Over Time

Measurement of Provider Behavior and Education

- When ASH identified potential X-ray overutilization, actions were taken by designing primary and secondary interventions that addressed the specific circumstances indicated in analysis.
- As an overview of the analysis, ASH reviewed and compared X-ray data with the previous year. Each evaluation was designed using measurable terms, so comparisons could be made with previous findings.
- ASH national claims data was reviewed to determine regional utilization practices.
- A focused analysis was then conducted when a trend of overutilization was identified.



Monitoring and Evaluating Over Time

Measurement of Provider Behavior and Education (continued)

- In general, the intervention included the following items:
 - Should a high utilization rate be identified, educational efforts related to professionally recognized standards of care will be pursued, such as:
 - a) Broadcast fax to providers
 - b) Educational letters
 - c) Educational material on ASHproviders.com with notification in the practitioner newsletter
 - Following quarterly measurement for the ensuing two quarters, analysis of educational efforts will be undertaken. Individual practitioner(s) may be identified and sent an inquiry letter providing statistics of individual utilization patterns that are significantly above the network average utilization, as well as additional educational materials.
 - When identified as necessary by a peer clinical committee, further action may be taken, including but not limited to corrective action plans, a shift to a provider UM tier with greater oversight of X-ray utilization, or termination from the network.



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