



Advanced Imaging Management AIM Workgroup

Decision Support Tools Staff Summary Report

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Background

Washington state is leading efforts to use evidence based medicine to make health policy and coverage decisions. A new legislatively created workgroup is charged with:
“identify evidence based best practice guidelines or protocols applicable to advanced diagnostic imaging services and any decision support tools available to implement the guidelines or protocols.” Sec.2(1).

Summary

“Decision support tools” available to implement the evidence based best practice guidelines or protocols are not legislatively defined and could include a range of products from implementation criteria attached to a guideline to computer programs using evidence based criteria, to review services that use evidence based criteria.

The workgroup invited organizations that provide advanced imaging related criteria or products to provide brief materials and presentations at the June 2, 2009 meeting, summarized below. Additionally, Appendix A includes relevant excerpts from an information request conducted by OHSU.

Overview

A summary of the different decision support tool components as well as a listing of the Organizations are included in Table1, below. In general there were two “program models”: which will be referred to in this report as Clinical Decision Support and Benefits Management Systems. Aside from the table description, the “do it yourself” purchase of criteria is not further detailed.

Both program models use a computer program that requires relevant patient information and proceeds through a series of questions/criteria related to imaging method, disease and/or medical condition. Both program models indicate that they are evidence based and most cite ACR Appropriateness Criteria as a primary basis. The computer programs differ among vendors and models in specifics such as: display, order of arranging (e.g. by modality or condition); level of detail; alternatives. It is beyond the scope of this report and possible only by direct comparison of mostly proprietary algorithms to ascertain differences in individual criteria and whether those criteria, rigor of evidence level for each criteria, and “stringency” of the criteria.

The clinical decision support was originally purposed to support a provider at point of care in clinical decision making and is generally installed and connected to a provider’s electronic medical record, though some are web accessed. The benefit management system was originally purposed to support payors in determining medical appropriateness and fit within benefit design and is generally installed and connected to a payor’s utilization or claims support process, though some are web accessed. Both models now have been extended to be accessible to both payors and providers and allow different access and reporting that would support both business functions. Depending on the model, additional services to support the computer program are bundled or can be added on.

A primary distinction is the degree and method by which a payor’s reimbursement policy is enforced, which generally is through voluntary education in the clinical decision support model and through prior authorization (permission) in the benefits management model. However, both models can now accommodate these processes.

Table 1: Decision Support Tools

#	Support Tool Type	Description	Attributes	Model Example
	Criteria, algorithms, protocols	Produced with guidelines or based on others' guidelines. Can include decision trees; criteria; algorithms; or protocols for clinical decision making	<ul style="list-style-type: none"> • Electronic or paper documents/web pages • Purchase or publicly available developed by public and private orgs • for use by provider, payor or health care organization 	Milliman Ambulatory Care guidelines (inc. outpatient radiology)
	Clinical decision support systems (CDDS) (also called radiology order entry)	Interactive computer programs designed to assist providers with medical decision making that are based on rules or logic modules (including evidence based guidelines).	<ul style="list-style-type: none"> • Installed in provider offices or accessed by providers through the web • Software purchase or license/subscription fee • Used by provider to decide on treatment/diagnostic • Most also provide reports to providers 	Nuance (RadPort -MGH) Medicalis Innovent Oncology
	CDDS – plus database	Same as above plus additional software for aggregating and reporting	<ul style="list-style-type: none"> • Same as above plus • Decision support tool may include inquiry number for tracking or notification • Information and reports from multiple providers available to payor(s) 	ICSI HTDI Model using Nuance software Medicalis

#	Support Tool Type	Description	Attributes	Model Example
	Benefits management systems (also called Radiology Benefit management systems)	Interactive computer program designed to assist health plans in deciding appropriateness, medical need, or efficiency of health care procedure based on rules or logic criteria (including evidence based guidelines) under a health benefit plan.	<ul style="list-style-type: none"> • Installed in payor organization (or contracted vendor) accessed through web • Software or license purchase • Used by payor to manage utilization and for reporting • Provider may access via web and use to review payment criteria or obtain permission 	CareCore National; MedSolutions
	Benefit management Services (also called utilization management or review)	<p>Evaluation of appropriateness, medical need or efficiency of health care services for a health plan based on criteria (including evidence based guidelines). Often bundled with benefit management system. Services can include:</p> <ul style="list-style-type: none"> • Audit or retrospective review for adherence to criteria • Provider education • Provider incentive systems • Prior notification processing • Prior authorization processing • Related services for updates, call center, appeals, reports, etc 	<ul style="list-style-type: none"> • Often bundled with system or embedded in system (see above) • Services provided by contract, typically on per member per month basis, some offer at risk component; some per review or other basis 	Qualis CareCore National; MedSolutions

Appendix A – Excerpts from OHSU conducted RFI on Imaging Services

Oregon Health Sciences University (OHSU), as part of a state funded consortia called MED (Medicaid Evidence-Based Decisions) Project, conducted a request for information (RFI) from radiology benefit management companies in 2007. An excerpt of the findings is included below.

Four major vendors, AIM, HealthHelp, NIA, and CareCorp responded, and Milliman responded offering its guidelines for payors to implement. A summary is provided for the “turnkey” imaging management service which includes: 1.) screening telephone calls or web based requests from providers, 2.) assessing clinical appropriateness, 3.) obtaining additional clinical information and consultation with the requesting physician (as appropriate), 4.) issuing an authorization or denial (*See below) and 5.) providing reports on PA service and results. Several vendors agree to support the health plan with appeals resulting from the PA program. All maintain a phone center and a web based portal. In addition to PA services, all provide services to assess the capabilities and quality of the radiology provider network; and some provide claims auditing services.

*Some vendors offer two or three levels of intervention. These levels of intervention include:

1. Notification –requests are tracked and the payer notified of the performance and appropriateness of the services being ordered; approvals and denials are not issued
2. Prior consultation—requests are reviewed against clinical guidelines and the ordering physician is educated on the appropriate imaging test; no denials are issued
3. Prior authorization—requests are reviewed against clinical guidelines, the ordering physician is educated on appropriate imaging; a denial is issued if needed

Evidence Supporting Criteria

All of the vendors call their criteria “evidence based”. One vendor does not describe how their clinical guidelines were formulated or the evidence supporting the guidelines. The guidelines for all of the other vendors are the result of a literature review plus published guidelines by major medical organizations¹ and “regionally accepted practice protocols”. Guidelines are developed by internal medical staff and reviewed by external experts. Medical directors of the health plan customers have an opportunity to approve the criteria for the PA program of their company. Expert opinion plays a strong role in the evidence base for all vendors. The quality of the evidence supporting the pre-authorization criteria is difficult to assess without looking at the criteria and supporting guidelines. The process described by the vendors (the creation of guidelines by a small group of internal medical staff with outside review and the lack of detail about the literature search and literature evaluation process) are worrisome.

¹ Cited medical organizations include, American College of Radiology, Royal College of Radiology, American Institute of Ultrasound in Medicine, Society of Nuclear Medicine, American Academy of Neurology, American Academy of Orthopedic Surgery, American Medical Association, American College of Cardiology.

Reports

All of the vendors issue reports to the health plan customers. These fall into several categories:

1. Service parameters—number of phone calls, length of average phone call, length of wait time, etc.
2. Utilization reports—number of studies requested and performed, number and percentage of approvals and denials, number of RN and physician consultations, etc.
3. Modality reports—number of studies ordered and approved by modality
4. Ordering physician reports by individual and by specialty—number and types of studies ordered by physicians, approval/ denial rates by specialty
5. Cost savings analysis

Pricing

<u>Vendor</u>	<u>PMPM</u> (per member per month)
Vendor 1	no pricing given
Vendor 2	\$0.19- 0.25
Vendor 3	\$0.24- 0.28
Vendor 4	\$0.15- 0.21
Guidelines only	\$0.11 PMPY

Projected Savings

All of the vendors state that savings vary from plan to plan. An additional caveat is that all vendors create a trend analysis prior to the start of the PA program; they calculate savings based on the pre-existing trend (for example, if imaging expenses were increasing at 20% annually, the base line for savings calculations would be 120% of expenses at the beginning of the program rather than 100%). Vendor 1 estimated savings from a PA program of 15-25% with savings of 30-40% for a program including PA, facility management and claims audits; they give return on investment estimates of 6:1 to 12:1. Vendor 2 gives examples with cost savings of 25-50%. Vendor 3 estimates net savings of \$2.03 PMPM (15-20%); return on investment is approximately 7:1.

Strategies

All of the vendors provide toll free phone numbers to call and a web based interface for ordering physicians to communicate with the PA vendor. All of the vendors provide education to the ordering physician community prior to the initiation of the PA program. The aim of these two components is to reduce resistance to the PA program from the ordering physicians. Each of the vendors uses a proprietary set of guidelines to screen the appropriateness of the requested imaging studies. The criteria used and the evidence base are discussed below. All vendors used a three tiered approach to screening. The first level is staffed by non-medical clerical personnel who input the demographic and clinical information provided by the physician. If the information is adequate and the study requested appropriate, the study is approved immediately. If the requested study does not meet screening criteria at this level, the request is reviewed by RNs, LPNs or RTs who gather more history and try to approve the request at the second level. If the request is thought to be inappropriate at the second level, the request is reviewed by a physician reviewer who may consult with the requesting physician. Denials can only be

issued by physician reviewers. More than 70% of requests are approved at the first level. Nurse reviewers review 15-30% and physician reviewers review 4-10%. The consultation process results in changed orders or voluntary withdrawals in 3-6%. Denials typically make up less than 3% of requests. All vendors have provisions for urgent cases with retrospective instead of prospective review. The health plan purchaser can choose which services to include in the PA program. For instance, the PA program could include all radiology services or only CT, MR, nuclear medicine and ultrasound. All vendors initiate their programs with an analysis of current imaging utilization to provide a baseline and trend analysis.

Summary

Five responses are submitted. Four responses are for turnkey PA programs and one is for outpatient clinical care guidelines. There are many similarities between the four PA vendors. There are very few differences of importance. All of the vendors provide an integrated decision support system to manage radiology utilization. The evidence basis of the criteria is of concern for all of the vendors.