Advisory Board | Imaging Performance Partnership

Imaging CDS Provider Adherence Compendium

Compendium #3: Toolkit for Successfully Implementing Imaging CDS

IMPLEMENTATION RESOURCE

Look inside for:

- Comprehensive guide to ongoing provider education efforts
- Strategies to improve performance of outlier providers
- Best practices for tracking CDS metrics
- Matrix for evaluating hard stops

Your Guide to This Compendium

WHEN SHOULD YOU THIS RESOURCE?

- Struggling with ordering provider adherence to guidelines
- Developing ongoing CDS education strategy
- Preparing for conversations with outlier providers
- Tracking and analyzing CDS outcome data

WHO SHOULD USE?

These resources are designed for CDS leaders, most commonly:

- Imaging leaders
- CMIO, CMO, CIO
- VP Ambulatory
- Radiologists

What's Your Goal?

My Goal is to:	Use This Resource:
❑ Create impactful provider variation reports ❑ Identify outlier ordering providers through data analysis	Resource #1: **Best Practices for CDS Provider Reports**. 3
❑ Develop a strategy to deliver ongoing CDS education ❑ Understand the appropriate method of delivery based on organizational culture	Resource #2: **CDS Clinician Education Strategy Assessment** 4
❑ Address outlier ordering physician concerns with CDS ❑ Provide evidence to encourage outlier adherence	Resource #3: **CDS Outlier Talking Points.** 8
❑ Select metrics that quantify CDS outcomes ❑ Determine next steps required for data collection	Resource #4: **CDS Metric Selection Guide**. 9
❑ Decide if hard stops are appropriate for organization ❑ Lay out a plan for hard stop deployment that will achieve desired goals	Resource #5: **Hard Stop Decision Making Guide** 10
❑ Estimate the impact CDS will have on volumes ❑ Review how CDS has shifted volumes at other organizations	Resource #6: **CDS Volume Impact Analysis**. 11

Interested in Additional CDS Resources?

Four Sections of the Toolkit for Successfully Implementing Imaging CDS

Section #1: Engage and Educate Stakeholders → **Section #2: Go Live with CDS** → **Section #3: Improve Provider Adherence and Data Analysis** → **Section #4: Realize Outsized Value of CDS**

Access all our CDS resources and best practices at advisory.com/ipp/cds

Resource #1

5 minute read

Best Practices for CDS Provider Reports

Resource Description

This highlights common mistakes and related solutions for CDS provider reports (i.e., reports that display provider ordering data).

Use This Resource to:

Create meaningful and impactful individual provider reports that promote more appropriate imaging care.

Common Pitfall	Problem Caused	Best Practice Solution
Includes data for short time period	Few meaningful conclusions drawn due to small sample size; clinicians see reports too often causing fatigue	**Include data from past 1-3 months and deliver reports on regular basis (e.g. monthly, quarterly);** timeframe ensures acceptable sample size for accurate data analysis, and present clinicians with recent, actionable data
Includes data for long time period	Relevant and actionable insights lost in sea of data; clinicians cannot make sense of complicated or lengthy report	
Shows only individual provider performance	Providers cannot tell if they are high, average, or low performers; results in little motivation to change behavior	**Display both individual and group physician data**; allows provider to understand performance compared to peers
Tracks single metric	Data may be misleading because only represents singular issue	**Track multiple, targeted metrics to offer a nuanced performance picture**; include the most relevant information, such as: • Appropriateness rate[1] • Inappropriateness rate[2] • Frequency of changed, cancelled orders • Frequency of missing structured indications
Shows superfluous data	Relevant and actionable data overshadowed, clinicians daunted by lengthy report, and do not have time to read	
Expected to drive clinician behavior alone	Clinicians quickly forget reports, do not change ordering patterns, and fail to view CDS as ongoing learning opportunity	**Tie reports to ongoing CDS education efforts**; organizations must follow up reports with group and/or individual clinician education to establish a culture dedicated to appropriate imaging care
Does not contain enough information about data	Clinicians cannot decipher report, do not trust data, do not understand clinical implications; choose to ignore future reports	**Provide relevant contextual information about the data**, such as: • Timeframe of data collection • Provider cohort • Care setting Clearly label graphs so clinicians not as familiar with CDS or imaging appropriateness can easily comprehend information

1) Example: Scored 7-9 on American College of Radiology appropriateness scale.
2) Example: Scored 1-3 on ACR scale.

Source: Imaging Performance Partnership interviews and analysis.

15 minute activity

CDS Clinician Education Strategy Assessment

Resource Description

This assessment helps identify the best way to provide ongoing provider education based on your organization's culture.

Use This Resource to:

Determine an approach for ongoing provider education. After completing the assessment, review the education strategy corresponding with your highest score.

Instructions: Rate your level of agreement with each of the statements below. Next, tally scores for each section by adding the numeric values of each response. To find out what that is, note the number of the section with your highest score (section A, B, or C) and turn to the next three pages for best practices on how to deliver education.

While the strategies aren't mutually exclusive, that highest scored may be best for your organization.

Section A	Strongly Disagree	Disagree	Agree	Strongly Agree
Ordering physicians have a strong relationship with their physician leaders.	1	2	3	4
Physician leaders discuss quality initiatives with ordering physicians.	1	2	3	4
Physician leaders are (or will be) incentivized on utilization management targets.	1	2	3	4
Ordering physicians (will) express their CDS concerns primarily to physician leaders.	1	2	3	4
Ordering physicians at my organization would be comfortable having one-on-one conversations about utilization with their section chief or other physician leader.	1	2	3	4
Radiology leaders are wary of being viewed as the gatekeeper of imaging services.	1	2	3	4

Section A Score:

Section B	Strongly Disagree	Disagree	Agree	Strongly Agree
Ordering physicians have strong relationships with our radiology program.	1	2	3	4
Physicians are collaborative in sharing clinical best practices across specialties.	1	2	3	4
Physicians are (or will be) incentivized to manage appropriate utilization.	1	2	3	4
Ordering physicians (will) express their CDS concerns primarily to radiologists.	1	2	3	4
Radiologists would be interested in taking an active role with physician education.	1	2	3	4
Ordering physicians at my organization would be comfortable having one-on-one conversations about utilization with a radiologist.	1	2	3	4

Section B Score:

Section C	Strongly Disagree	Disagree	Agree	Strongly Agree
Physicians are generally open to feedback from their peers.	1	2	3	4
We have regular established meetings for physicians to discuss clinical issues.	1	2	3	4
Our physicians have close relationships with others in their specialties.	1	2	3	4
The majority of ordering physicians are tightly aligned (employed, large medical group).	1	2	3	4
There is no significant competitive tension between physicians.	1	2	3	4
Even top performing physicians would be amenable to informal continuing education.	1	2	3	4

Section C Score:

Source: Imaging Performance Partnership interviews and analysis.

CDS Clinician Education Strategy Assessment (Continued)

Section A: Physician Leader-Led Outlier Education

Description of Strategy: Physician leaders, typically chief medical officers or department chairs, are responsible for educating outlier ordering clinicians. After receiving reports from CDS leaders, these physicians meet one-on-one with outliers to walk through the clinician's recent report, discuss relevant cases, and answer any questions. These physician leaders also use this time to gather feedback and address any frustrations with CDS.

Pros	Cons
✔ Leverages existing relationships between clinicians and clinical leadership	✖ Physician leaders may lack radiology expertise necessary to answer specific questions about clinical guidelines
✔ Opens dialogue for clinicians to freely express any concerns about CDS	✖ Could feel more like a disciplinary meeting than an open conversation
✔ Allows leader to frame CDS as part of larger clinical quality initiatives	

Strategy in Practice at Castro Medical Center[1]

Section chiefs financially incentivized to decrease inappropriate imaging utilization

Imaging leader distributes utilization reports to section chiefs

Section chiefs hold educational one-on-one conversations with outliers

Case in Brief: Castro Medical Center[1]

- Mid-sized academic medical center
- Radiologists scrub CDS data to ensure scores accurately reflect local best practice guidelines
- Imaging director distributes CDS reports to section chiefs each quarter; publically posts blinded aggregate reports to show overall performance and appeal to physicians' competitive nature
- Section chiefs hold one-on-one educational sessions with any outlier providers; definition of "outlier" determined by section chiefs and may vary by section
- Section chiefs financially incentivized to control utilization, decrease inappropriate imaging orders

1) Pseudonym.

Source: Imaging Performance Partnership interviews and analysis.

CDS Clinician Education Strategy Assessment (Continued)

Strategy B: Radiologist-Led Outlier Education

Description of Education Strategy: Imaging is responsible for educating outlier ordering clinicians. A radiologist meets one-on-one with outliers to explain the importance of appropriate imaging use and walk through the clinician's recent report to review relevant cases and answer any questions. The leader also uses this time to gather feedback and address any frustrations with CDS.

Pros

- ✔ Keeps conversation physician-to-physician
- ✔ Takes advantage of imaging's clinical expertise
- ✔ Offers clinicians opportunity to give feedback directly to CDS leader
- ✔ Feels more like a discussion than a disciplinary meeting because clinician supervisor not present

Cons

- ✖ Requires radiology to be the "gatekeeper"
- ✖ May not be able to recruit enough radiologists to meet with all outliers
- ✖ Potentially causes radiologist to feel like the disciplinarian
- ✖ Radiologist may not be as familiar as imaging director with utilization data

Strategy in Practice at Weho Memorial Hospital[1]

Radiology Director, Business Analyst, IT leader monitors utilization and low-utility ordering or "red rates[2]"

Radiologist holds one-on-one educational conversation with outliers (clinicians with highest red rates by exam type) each quarter

Decrease in red rate (11% to 9%) from 2013 to 2014

Case in Brief: Weho Memorial Hospital[1]

- Large community hospital
- Implemented CDS using NDSC at the end of 2012
- Director of Radiology, IT leader, business analyst track imaging utilization with CDS data
- Director of Radiology identifies outlier providers, defined as those with highest red rate, and distributes list and reports to radiologist leader
- Radiologist holds quarterly one-on-one educational sessions for outliers
- Between 2013 and 2014, average hospital red rate decreased from 11% to 9%

1) Pseudonym.
2) Exams scoring a 3 or below on 1-9 appropriateness scale.

Source: Imaging Performance Partnership interviews and analysis.

CDS Clinician Education Strategy Assessment (Continued)

Strategy C: Provider Cohort Education

Description of Education Strategy: Providers gather by cohort to discuss CDS and imaging utilization in an open forum as a group, led by physician leaders. The group walks through their cohort reports to discuss best practices and ask questions. Discussion covers cohort-wide areas for improvement and addresses any frustrations with CDS. *Note: this strategy can be executed in conjunction with strategies 1 or 2.*

Pros

- Frames CDS as a collaborative effort to improve care
- Discussing specific scenarios allows clinicians to learn from their peers
- Showing unblinded results appeals to clinicians' competitive nature
- Participating leaders can identify any cohort-wide frustrations and improve CDS

Cons

- Outlier clinicians could feel targeted
- Group discussions could lead to arguments, conflict
- If not paired with education, risks disengagement of outliers
- Requires time from all clinicians, not just outliers

Strategy in Practice at Brigham and Women's Hospital

BWH distributes detailed clinician reports showing adherence to evidence comparison to peers

Clinician cohorts gather to discuss unblinded imaging utilization results quarterly

BWPO[1] leader holds one-on-one educational sessions with outliers and any other interested clinicians

Case in Brief: Brigham and Women's Hospital

- 765-bed academic medical center located in Boston, Massachusetts
- Developed and implemented CDS[2] tool in 2005
- Distributes detailed provider reports that show relevant evidence, adherence rate for specific exams, and comparison to peers
- Twice a year, providers gather in cohorts to discuss unblinded reports
- Outliers, defined as providers with the highest percentage of deviation from evidence, targeted for additional one-on-one education

1) Brigham and Women's Physicians Organization.
2) Brigham developed the CDS platform that launched vendor Medicalis.

Source: Brigham and Women's Hospital, Boston, MA; Imaging Performance Partnership interviews and analysis.

5 minute read

CDS Outlier Talking Points

Resource Description

This tool outlines common objections ordering clinicians, especially outliers, may express during conversations about CDS data.

Use This Resource to:

Prepare for educational sessions with ordering physicians, particularly outliers. The tools outlines actionable guidance to promote CDS adherence and engagement.

Outlier Statement	CDS Leader Response	Next Steps to Promote Adherence
I'm being singled out. My ordering patterns don't differ from my peers.	The data do suggest that your ordering behavior deviates from your peers. I wanted to talk to you about how we can resolve that—the goal here is to improve imaging care.	• Look at clinician's report, discuss results, and explain exactly what the data show. • Ask questions to help identify why the clinician deviates from guidelines so you can address the root cause of low adherence.
I order the same way I always have.	It's difficult for busy clinicians to keep up with the newest evidence that keeps coming out, but CDS incorporates that evidence and helps you make decisions based on clinical best practices.	• If possible, focus the conversation to an area, such as an exam type or clinical indication where the clinician particularly struggles. • Narrowing the conversation can help you give actionable guidance that can lead to ordering behavior changes.
The system can't incorporate the nuances of patient care.	CDS is a tool to help you make decisions by presenting clinical evidence and expert consensus. You should still use your own judgment when ordering imaging, and will order differently than clinicians who see similar patients.	• Show evidence of outlier patterns compared to others in specialty. • Ask the clinician if there are any specific guidelines they do not agree with; *see below*.
I don't agree with the guidelines.	Most of the guidelines in CDS come from national medical societies, like the American College of Radiology. *Explain how your organization customized guidelines.*	• Determine if there are particular guidelines the clinician doesn't agree with. • Look at clinician's report to see if outlier status would stand regardless of that single guideline.
The system slows me down and delays patient care.	When ordering appropriately, CDS should require minimal extra time.	• Ask if there are any particular workflow issues that could be resolved. • Bring forth viable suggestions to CDS team to optimize workflow.
Some of my patients request imaging. I order it to satisfy them.	You can use CDS as a tool to engage patients by showing them evidence of why a certain exam is clinically (un)necessary, This leads to more shared decision making.	• Compare outlier data with clinicians who serve similar patient populations. • Suggest that the clinician document whenever an exam is ordered against guidelines specifically to improve patient satisfaction.

Source: Imaging Performance Partnership interviews and analysis.

Resource #4

20 minute activity

CDS Metric Selection Guide

Resource Description

This tool lists CDS-related metrics organized into two categories: managing utilization and standardizing care.

Use This Resource to:

Determine which metrics related to CDS to track. Select the metric(s) that align best with your intended goal(s) and record whether or not it's currently tracked, the necessary source, and additional notes.

Metrics Displaying Utilization Management

Metric	Definition	Currently Track Metric (Y/N)?	Data Source Required	Notes
❑ **Utilization rate by volume** *e.g. per 1,000 patients*	Utilization changes after CDS consultation by modality			
❑ **Total, per capita imaging cost savings**	Cost savings resulting from changed orders			
❑ **Imaging expenditure per patient**	Total dollars paid to imaging center per patient, increased imaging management if data shows lower utilization and less costly imaging			
❑ **Aggregate, physician-level appropriateness scores**	Percentage of appropriate exams ordered after consulting AUC			
❑ Other:				

Metrics Displaying Appropriate Imaging Standardization

Metric	Definition	Currently Track Metric (Y/N)?	Data Source Required	Notes
❑ **Yield of positive tests for indication, exam**	Positive predictive value of imaging exam orders, shows improved patient outcomes especially when displayed with decreased utilization rates			
❑ **Frequency of changed, cancelled orders**	Percentage of changed or cancelled orders after AUC consultation, shows ordering pattern shifts			
❑ **Utilization rate variation by presenting condition**	More nuanced metric than aggregate utilization rates; compares imaging use for similar patients to measure standardization of imaging care			
❑ **Aggregate, physician-level appropriateness scores**	Percentage of appropriate exams ordered after consulting AUC			
❑ Other:				

Source: Imaging Performance Partnership interviews and analysis.

20 minute activity

Hard Stop Decision Making Guide

Resource Description

This tool provides pros and cons for hard stops. It also outlines the process for effectively deploying a hard stop.

Use This Resource to:

Understand the benefits and drawbacks of hard stops. If hard stops will support CDS implementation at your organization, follow the five-step process to effectively deploy the alerts.

Considerations for Deploying Hard Stops

Instructions: Consider the pros and cons for deploying hard stops and then write additional organizational considerations below.

Pros	Cons
Proactively **promote provider adherence** to CDS at point-of-order	**Non-punitive measures**, e.g. provider reports, accomplish same goal
Benefit data integrity by capturing correct indication	Providers grow **frustrated with alerts**; could encourage more gaming
Improve patient's **downstream medical history**; give providers additional context about presenting symptoms	**Inhibit efficient throughput**, potentially delaying necessary care
Other: _____	**Other:** _____
Other: _____	**Other:** _____

Process to Deploy Effective Alerts

Instructions: Review the steps for deploying hard stops and then write how you will adopt these steps for your organization.

Step	Description	Your Notes:	Project Owner:
1. Identify the Problem	Collect baseline data to understand problem, segment by specialties, care settings		
2. Define the Goals	Outline how interventions advance goals, consider alternative tactics, e.g. provider reports, peer consultation		
3. Test the Intervention	Ensure alert fires only for correct exams, providers, care settings		
4. Educate Providers	Emphasize quality improvements resulting from intervention; educate about benefits to get buy-in before deployment		
5. Analyze CDS Data	Analyze data after deployment; consider turning off intervention if problems not corrected		

Source: Imaging Performance Partnership interviews and analysis.

10 minute read

CDS Volume Impact Analysis

Resource Description

This tool outlines the potential volume changes CDS may have on imaging volumes based on prior experiences.

Use This Resource to:

Estimate the potential impact of CDS on your imaging volumes by modalities. Impacts vary amongst organizations, so begin by measuring your potential impact and then learn about other organizations' experiences.

By 2020, imaging programs must comply with the Medicare CDS mandate for advanced imaging exams, otherwise known as the Medicare AUC Program. This program requires providers to consult appropriate use criteria (AUC) through an electronic clinical decision support system (CDS) when ordering advanced outpatient imaging exams. Implementation of this tool has the potential to impact current imaging volumes, because clinical guidelines may prompt providers to reduce inappropriate imaging orders and/or shift orders to more appropriate modalities.

Steps to Measure CDS Impact

Studies from early adopters of CDS reveal that successful implementation of the tool has the greatest impact on CT and MRI exams, generally with CT exam utilization decreasing and MRI exam utilization increasing after CDS use. This is mainly attributable to the higher radiation doses found in CT exams, since guidelines embedded in CDS tools may prompt providers to order MRIs to mitigate radiation dose concerns.

Organizations follow the steps below to track and measure the impact of CDS on volumes:

1. **Collect Baseline Utilization Data**: Prior to CDS go-live, collect baseline data for at least two months, up to one year, to understand current ordering patterns and utilization rates. Collect metrics that show utilization such as:

Per capita (or per 1,000) utilization rate

Per capita (or per 1,000) utilization rate variation by specialty, presenting condition

2. **Obtain Real-Time CDS Data**: Many vendors provide data tracking within their basic CDS software or allow organizations to purchase more robust packages. Access CDS data on a regular basis, such as monthly or quarterly. Continue to also track and analyze progress against key metrics collected during the baseline period.

3. **Develop a Plan to Analyze and Use Data**: Develop a plan internally to continually analyze the data and to prepare for major volume shifts that may impact capacity or scheduling processes.

Common Challenges in Measuring Impact

While stakeholders are eager to project volume shifts resulting from CDS implementation, it's difficult to provide national benchmarks. Modality shifts are unique to each organization depending on the level of appropriate ordering existing before CDS and providers' willingness to respond to appropriate use criteria.

Account for Important Caveats

Assume unique baseline of appropriate ordering due to existing organizational utilization management initiatives, influence of RBMs[1]

Expect organizational, physician preferences will contribute to individual implementation experience

1) Radiology Benefit Managers.

Source: Imaging Performance Partnership interviews and analysis.

CDS Volume Impact Analysis (Continued)

Three Organizations' CDS Experiences

To guide estimates of CDS volume impact, three organizations' experiences are outlined below. These early adopters saw a significant impact from CDS implementation. However, it is important to note that their experience is not likely to be universal, for several reasons:

- These early adopters have embedded CDS and CDS education into referring physician workflows more thoroughly, and for a longer time, than many other providers.
- These early adopters implemented CDS before the wide use of preauthorization by payers. For providers subject to preauthorization, there is already a utilization control mechanism in place, so volume decreases due to CDS are not likely to be as significant.
- Organizations with an existing baseline of highly appropriate imaging may see no change at all.

Massachusetts General Hospital[1], 2007 - 2013

28% Utilization rate decrease for all high-cost imaging[2]

33% Utilization rate decrease for CT

5% Utilization rate decrease for MRI

Compare to:

Compare to:

Compare to:

Smaller MRI utilization decrease at MGH than Medicare suggests CT to MRI shift due to CDS

Other (non-CDS) providers[3], 2007 - 2013

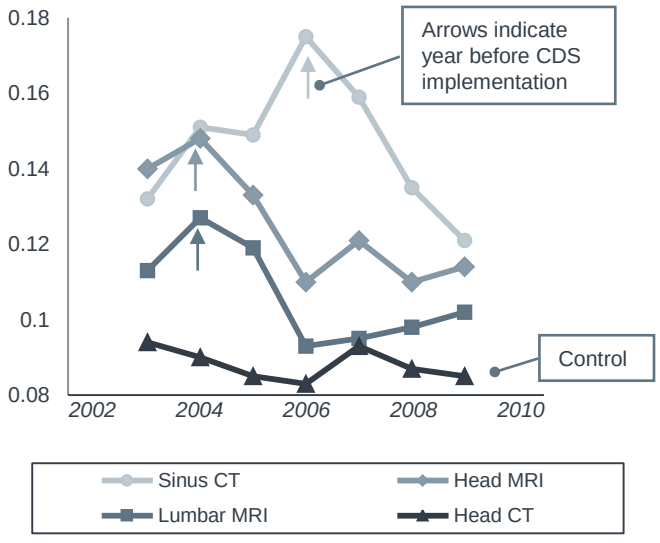
20% Utilization rate decrease for high-cost imaging exams at Massachusetts providers using RBM

23% Utilization rate decrease in CT under Medicare Part B

13% Utilization rate decrease in CT under Medicare Part B

Utilization for Specific High-Cost, Low-Value Exams at Virginia Mason

Rate of Outpatient Imaging for Patients with Disease-Specific Billing Codes From Regional Payer



1) Implemented CDS in 2005, tracked results in outpatient and emergency department for all insurance types over seven year period, 2007 – 2013.
2) High-cost imaging: sum of CT MRI, nuclear imaging, and PET.
3) Did not implement CDS.
4) Implemented CDS in 2007; tracked results in outpatient setting for all insurance types over two month period before and after.

HealthPartners CDS Outcomes, 2007[4]

36% Decrease in CT Head exams for 72 indications

vs.

3.3% Increase in MRI Head exams for 68 indications

Source: Blackmore C, et al., "Effectiveness of Clinical Decision Support in Controlling Inappropriate Imaging," Journal of the American College of Radiology 8 (2011): 19-25; Harvey L. Neiman Health Policy Institute, Neimanhpi.org; Solberg LF, et al. "Effects of Electronic Decision Support on High-Tech Diagnostic Imaging Orders and Patients," *Am J Manag Care*, 16, no. 2 (2010): 102-106; Weilburg, Jeffrey B, et al. "Utilization Management of High-Cost Imaging in an Outpatient Setting in a Large Stable Patient and Provider Cohort over 7 Years," *Radiology*, 284, no. 3 (2017): 766-776. Imaging Performance Partnership interviews and analysis.

CDS Volume Impact Analysis (Continued)

Additional Resources to Guide Analysis

- Blackmore C, et al., “Effectiveness of Clinical Decision Support in Controlling Inappropriate Imaging,” Journal of the American College of Radiology 8 (2011): 19-25.
- Ip, Ivan K., et al. “Impact of IT-enabled Intervention on MRI Use for Back Pain,” *Journal of Medicine*, 127 (2014): 512-518.
- Khorasani, Ramin, et al. “Ten Commandments for Effective Clinical Decision Support for Imaging: Enabling Evidence-Based Practice to Improve Quality and Reduce Waste,” *American Journal of Roentgenology*, 203 (2014): 945-951.
- Min, Adam, et al. “Clinical Decision Support Decreases Volume of Imaging for Low Back Pain in an Urban Emergency Department,” *J Am Coll Radiol*, 14 (2017): 889-899.
- Moriarity, Andrew, K., et al. “The Effect of Clinical Decision Support for Advanced Impatient Imaging,” *J Am Coll Radiol*. 12 (2015): 358-363.
- Raja, Alis S., et al. “Effect of Computerized Clinical Decision Support on the Use and Yield of CT Pulmonary Angiography in the Emergency Department,” *Radiology*, 262, no. 2 (2012): 468-474.
- Solberg LF, et al. “Effects of Electronic Decision Support on High-Tech Diagnostic Imaging Orders and Patients,” *Am J Manag Care*, 16, no. 2 (2010): 102-106.
- Weilburg, Jeffrey B, et al. “Utilization Management of High-Cost Imaging in an Outpatient Setting in a Large Stable Patient and Provider Cohort over 7 Years,” *Radiology,* 284, no. 3 (2017): 766-776.

Source: Imaging Performance Partnership interviews and analysis.

Next Steps for CDS Leaders

Imaging CDS Resources Guide All Stages of Implementation

Four Sections of the Toolkit for Successfully Implementing Imaging CDS

Section #1: Engage and Educate Stakeholders → **Section #2: Go Live with CDS** → **Section #3: Improve Provider Adherence and Data Analysis** → **Section #4: Realize Outsized Value of CDS**

Educate stakeholders about imaging CDS

Action Steps

- Read the *CDS Education Research Brief* for support in crafting an education strategy
- Use the *Imaging CDS Education Compendium* to educate stakeholders on CDS benefits, build an optimal CDS team, and learn more about CDS requirements
- Present the *CDS Roadshow Presentation* to referring providers and organizational leaders to help them understand CMS requirements and tool benefits
- Review our blog outlining the most recent policy updates related to imaging CDS

Prepare for your organization to **go live with CDS**

Action Steps

- Read the CDS Implementation Research Brief for implementation guidance
- Use the Imaging CDS Implementation Compendium to understand vendor selection and develop a pilot for your organization
- Download the CDS Vendor Analysis Spreadsheet to identify a CDS vendor that fits your organizational priorities

Optimize the benefits of CDS

Action Steps

- Read the *Optimize Benefits of CDS Research Brief* for strategies to use the tool to advance larger organizational goals
- Use the *CDS Benefits Compendium* for resources to guide preauthorization negotiations and decision matrixes to prioritize value-based imaging projects
- Review the *Appropriate Use Toolkit* to align CDS with imaging appropriate use initiatives
- Access the *Emergency Department Imaging Utilization Benchmark Generator* to get benchmarks for imaging utilization in hospital-based EDs

Access all our CDS resources and best practices at advisory.com/ipp/cds