

Imaging CDS Education Compendium

Compendium #1: Toolkit for Successfully Implementing Imaging CDS

Look inside for:

- Cheat sheet and blog on imaging clinical decision support and Medicare requirements
- Guide to build an effective CDS team for your organization
- Material to prepare for conversations with referring providers

Your Guide to This Compendium

WHEN SHOULD YOU USE THIS RESOURCE?

- Getting up to speed on CDS requirements
- Preparing for CDS implementation at your organization
- Deciding what leaders to involve in CDS strategy
- Educating referring providers about CDS

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:

- ☐ Understand the components of imaging CDS
- ☐ Get up to speed on Medicare requirements
- ☐ Prepare for meetings with executives about CDS
- ☐ Understand CDS Medicare requirements in-depth
- ☐ Learn how CMS rulemaking process impacts CDS
- ☐ Answer specific questions about Medicare compliance
- ☐ Create a CDS steering committee
- ☐ Understand leadership roles during implementation
- ☐ Involve appropriate leaders in CDS strategy
- ☐ Educate stakeholders about CDS benefits
- ☐ Address unique provider concerns about the tool
- ☐ Prepare for pushback when using the tool

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Interested in Additional CDS Resources?

Four Sections of the Toolkit for Successfully Implementing Imaging CDS



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



Imaging CDS Cheat Sheet

Resource Description

This primer defines imaging CDS and outlines the Medicare AUC¹ Program.

Use This Resource to:

Quickly understand CDS, the Medicare requirements, and implications for imaging programs so that anyone involved with implementation or use of the tool understands the basics.

What Is Imaging Clinical Decision Support (CDS)?

CDS is an electronic tool that helps providers make informed ordering decisions based on established clinical guidelines. Clinical criteria are embedded into the IT tool, which has the ability to alert providers about the appropriateness of exams. This moves utilization management up in the imaging process to the point of entry. Organizations can strategically use CDS to advance value-based goals, such as contracting with private payers to manage imaging utilization internally.

Through the Medicare AUC Program, CMS² mandated that all ordering providers consult CDS when ordering advanced imaging exams in the outpatient setting. Imaging providers must document this consultation on claims in order to receive reimbursement. In the Calendar Year 2018 MPFS³ final rule, CMS set the deadline for implementation of this mandate to January 1, 2020. The first year of this program will be an educational and testing period with claims denials beginning in 2021. Between July 1, 2018 and January 1, 2020, organizations can voluntarily report CDS consultation on claims using HCPCS⁴ modifier, QQ.

How Does CDS Work?

CDS is comprised of two components: AUC and a CDS mechanism (CDSM), or IT tool, that uses these criteria to provide actionable ordering guidance. AUC provide imaging appropriateness information for specific exams based on patient indications and clinical guidelines. The tool can prompt the ordering provider to consider other imaging exams that may be more appropriate or to consult a radiologist. To see the full list of organizations approved to create AUC and vendors approved to deliver IT tools, visit the [CMS AUC webpage](#).

**Clinical
Decision
Support**



Appropriate Use Criteria

Clinical guidelines for imaging appropriateness created by provider-led entities approved by CMS



CDS Mechanism

Software tools that enable referring providers to consult AUC, available from vendors approved by CMS

Why Is CDS a Key Issue for Imaging?

- **Places imaging reimbursement at stake:** Beginning in 2021, Medicare reimbursement will be denied for advanced imaging exams ordered without CDS consultation. Although ordering providers are the end user of CDS, hospital imaging departments and radiologists are on the hook for demonstrating CDS use to Medicare for payment.
- **May disrupt referral patterns:** Implementing CDS may not be a seamless transition for all ordering providers. Many will need help navigating the CDS mandate and technology. The ability to support ordering providers through this process may be a factor in imaging programs' ability to secure referrals.
- **Can elevate care appropriateness and reduce costs:** CDS can improve care quality and reduce total costs of care for a population—both critical goals as health care shifts toward value—by ensuring that patients receive only necessary imaging exams. In addition, CDS has potential to reduce the burden of wrong order management, preauthorization, and denials.

March 2018

1) Appropriate Use Criteria.



2) Centers for Medicare and Medicaid Services.

3) Medicare Physician Fee Schedule.

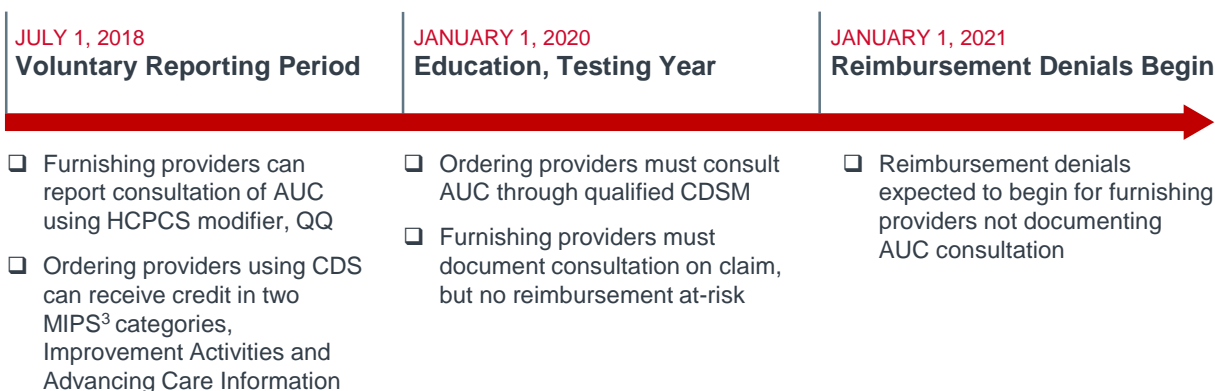
4) Healthcare Common Procedure Coding System.

Source: Centers for Medicare and Medicaid Services, CMS.gov; Protecting Access to Medicare Act of 2014; Imaging Performance Partnership interviews and analysis.

Medicare Requirements and Provider Penalties

	✓ Provider Requirements	⚠ Penalty for Noncompliance
Ordering Provider 	<input type="checkbox"/> Consult AUC via CDS for Medicare fee-for-service beneficiaries <input type="checkbox"/> For outpatient advanced imaging exams (CT, MR, PET, nuclear medicine)	Potential to be classified as an outlier, required to obtain preauthorization for Medicare patients as early as January 1, 2021 ¹
Furnishing Provider (Radiologist and Imaging Program) 	Submit documentation of consultation on Medicare claim ¹ : <input type="checkbox"/> CDS mechanism consulted <input type="checkbox"/> Adherence to AUC <input type="checkbox"/> NPI ² of ordering professional	Claim denied, Medicare reimbursement withheld beginning January 1, 2021; applies to both professional and technical components

Timeline for Clinical Decision Support



How Can Imaging Leaders Effectively Implement CDS?

- ☐ **Engage stakeholders through education:** CDS success depends on referring physician engagement. Imaging leaders should focus on teaching the benefits of CDS and explaining details of the mandate to health system executives, radiologists, ordering providers, and IT personnel.
- ☐ **Define and execute on staged rollout strategy:** Organizations should gradually roll out CDS beginning with a pilot, which allows leaders to identify and fix any issues with the tool. Commonly, organizations select a care setting, e.g. inpatient, and provider cohort, e.g. primary care, for early implementation, and then continue to roll out CDS to all settings with all providers over several months.
- ☐ **Continue to engage and educate providers after implementation:** Imaging leaders must continue to educate ordering providers by targeting outliers to ensure the organization is realizing the full value of CDS. Additionally, leaders should track CDS data and leverage outcomes to advance larger organizational quality, utilization management, or cost savings goals.

Imaging CDS Policy Blog

Resource Description

This blog outlines the most recent updates to the Medicare AUC Program finalized in the calendar year 2018 rulemaking cycles.

Use This Resource to:

Dive deeper into the Medicare AUC Program requirements, learn the most recent updates, and understand potential changes to look for in future rules.

What Medicare's 2018 rules mean for imaging CDS

November 21, 2017 by **Lea Halim** and **Ty Aderhold**

CMS's Medicare Physician Fee Schedule and Quality Payment Program (QPP) final rules for calendar year 2018 include new details about the imaging clinical decision support (CDS) mandate, also known as the Medicare Appropriate Use Criteria Program. Most significantly, Medicare delayed the CDS provider deadline to Jan. 1, 2020. For more details on this delay and other CDS updates, read on to get our four major takeaways from this year's rulemaking.

A Brief Recap on CDS

In the Protecting Access to Medicare Act (PAMA) of 2014, Congress included a mandate that ordering providers consult appropriate use criteria via electronic CDS when ordering outpatient advanced imaging exams for Medicare patients. Furnishing providers—most commonly radiologists and imaging programs—must document that consultation for reimbursement.

The legislation required CMS to provide implementation details around four key components of the program:

Component	Component definition	Current status	Details
Appropriate Use Criteria (AUC)	The clinical guidelines that providers consult to comply with the mandate	Complete; focus of 2016 rulemaking	CMS finalized the requirements and approval process for organizations—called Provider Led Entities (PLEs)—that can create and modify AUC. As of today, CMS has approved 17 organizations as PLEs.
CDS mechanisms (CDSMs)	The electronic tools that allow providers to consult AUC during ordering	Complete; focus of 2017 rulemaking	CMS finalized the requirements and approval process for CDSMs. As of today, CMS has approved seven CDSMs and provided preliminary qualifications to nine others.
Provider requirements	How ordering providers will demonstrate that they consulted AUC and how furnishing providers will submit that information to CMS	Focus of future rulemaking	CMS finalized the provider deadline as Jan. 1, 2020. The agency plans to finalize furnishing provider requirements, including claims-based reporting in future rulemaking.
Outlier providers	CMS will identify up to 5% of ordering providers as outliers and require them to obtain preauthorization when ordering imaging for Medicare patients	Focus of future rulemaking	CMS will review adherence to defined priority clinical areas—eight of which have been finalized—to identify outliers.

For more information on the previously finalized components and priority clinical areas, [read our analysis of the 2017 final rule](#).



This information reflects the **Calendar Year 2018 Medicare final rules** and is subject to change.

Source: Centers for Medicare and Medicaid Services, CMS.gov; Imaging Performance Partnership interviews and analysis.

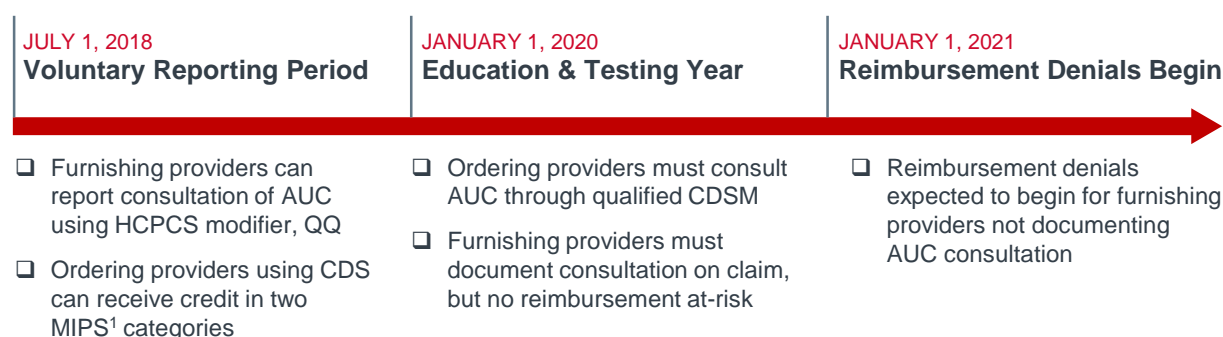
Key Takeaways

1. CDS implementation deadline delayed until Jan. 1, 2020

After proposing to postpone the provider deadline to 2019, CMS finalized an additional delay, officially moving the deadline from Jan. 1, 2018 to Jan. 1, 2020. This means that ordering providers will be expected to consult AUC and furnishing providers are expected to confirm this consultation on claims submitted to Medicare starting on Jan. 1, 2020. The first year of this program, from Jan. 1, 2020 to Dec. 31, 2020, will be an "educational and operations testing period," CMS said, with Medicare paying all claims regardless of whether they properly include AUC consultation information. Claims denials and reimbursement penalties are expected to begin on Jan. 1, 2021.

While CMS delayed the mandatory deadline, the agency maintained a July 2018 start date for voluntary reporting. During this period, furnishing providers may use a single Healthcare Common Procedure Coding System (HCPCS) modifier on claims to indicate that the ordering professional provided information on AUC consultation.

Timeline for Clinical Decision Support



Guidance for providers: While the two-year delay in the CDS deadline may lead some programs to pause implementation, we believe that organizations should continue to move forward with CDS and use the additional time to ensure a successful deployment. Organizations now have the opportunity to conduct comprehensive product testing, educate and train ordering providers on the importance of CDS adherence, and systematically roll out CDS across their system.

2. CDS now formally aligned with MACRA

In the CY 2018 final rule implementing MACRA's Quality Payment Program (QPP), CMS finalized the proposal to include AUC consultation using CDS as a high-weight improvement activity. Ordering providers can earn 20 points out of the 40 needed for full credit in the Improvement Activities category by demonstrating the use of CDS.

Providers who have satisfied a minimum score in the Advancing Care Information category have the opportunity to receive an additional 10-point bonus in that category for reporting CDS consultation as an improvement activity.

Improving quality and reducing cost, the remaining two MIPS performance categories, directly align with the overall goals for CDS. And CDS implementation can directly impact performance on several quality measures, including:

- Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Preoperative Evaluation in Low Risk Surgery Patients;
- Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Routine Testing After Percutaneous Coronary Intervention (PCI); and
- Cardiac Stress Imaging Not Meeting Appropriate Use Criteria: Testing in Asymptomatic, Low-Risk Patients.

For more generalized information on MACRA, read our initial [10 takeaways from the 2018 final rule](#).

Guidance for providers: The formal alignment of the AUC program with MACRA provides incentive for ordering providers to continue with CDS implementation despite the deadline delay. To encourage ordering providers to move forward, imaging programs can highlight how early adopters of CDS benefit in the 2018 MIPS performance categories. As an added benefit, early implementation allows all stakeholders to work through any challenges well ahead of the Jan. 1, 2020 deadline.

1) Merit-Based Incentive Payment System.

3. Proposals around documentation, hardship exemptions not finalized

No G-Code, HCPCS modifier combination for reporting

While the ordering provider must consult CDS, the furnishing provider is responsible for reporting that this consultation took place. This reporting must include three separate items: the CDSM consulted, the AUC adherence, and the national provider identification number of the ordering professional.

CMS proposed to develop new G-Codes to map to each qualified CDSM and a new series of HCPCS modifiers to provide information on the appropriateness of the order. However, the agency did not finalize this proposal after significant pushback from commenters on the added complexity of this reporting system. Instead, CMS plans to continue to explore "development of unique AUC consultation identifiers" and "mechanisms for CMS and qualified CDSMs to share data." This will likely be a focus of future rulemaking.

No changes to significant hardship exemptions

CMS also chose not to finalize changes to the AUC program's hardship exemptions. After the agency reviewed the comments on the proposal to align the exemptions more closely with ACI, the agency decided to not move forward. Instead, it plans to return to its policies on significant hardship exemptions in rulemaking for CY 2019.

Guidance for providers: With these two changes, CMS has demonstrated a willingness to work with imaging leaders in order to ensure the success of the AUC program. We recommend that providers become involved in the voluntary reporting period in order to identify basic reporting challenges prior to the Jan. 1, 2020 deadline.

Two approval categories for Clinical Decision Support Mechanisms (CDSMs)

Much of last year's MPFS rule focused on requirements and approval processes for CDSMs. This summer, the agency released its first list of approved mechanisms. Until the provider deadline, CMS is allowing two different qualification options for CDSMs:

1. **Full qualification:** CDSM met all requirements by the yearly January 1 application deadline; and
2. **Preliminary qualification:** CDSM met most, but not all, requirements by application deadline; CDSM demonstrates a clear timeline for when and how it will meet all requirements by Jan. 1, 2019. While CMS delayed the CDS deadline until Jan. 1, 2020, the agency made no mention of delaying the 2019 date by which CDSMs granted preliminary qualification status must meet all requirements. As of now, any CDSM with preliminary qualification status that does not meet these requirements by this deadline will be considered not qualified and must notify all providers of this updated status.

Guidance for providers: Stay informed about CDS vendors and their approval status. For those with preliminary approval, ask what requirements they do not yet meet and request an estimated delivery date of that requirement.

Other program clarifications of note:

- CMS has exempted Critical Access Hospitals (CAHs) from the CDS program, meaning that advanced imaging service furnished in CAHs do not require AUC consultation or reporting.
- The agency did not provide any further information on the exemption for emergency services, which currently applies to emergency services provided to individuals with emergency medical conditions. More details on how these cases will be handled are expected in future rulemaking.
- CMS also did not provide further information on how furnishing providers should handle updated or modified orders, but the agency acknowledged this issue and stated that it will be addressed in future rulemaking.

Guide to Building the CDS Team

Resource Description

The tool outlines roles needed for CDS implementation and suggests possible positions to fulfill them.

Use This Tool to:

identify individual leaders responsible for CDS planning, implementation, and strategy. Read the roles and then write down potential team members to recruit at your organization.

Core Decision Team

	Role	Potential Team Members	Team Member Name(s)
<input type="checkbox"/> Imaging Leader	Operationalize use of tool, stay updated on Medicare requirements, support final decision maker	Director of Imaging, Radiology Director, System Imaging VP	
<input type="checkbox"/> Radiologist(s)	Add clinical expertise, champion CDS to peer radiologists	Radiologist(s)	
<input type="checkbox"/> Physician Executive	Consider provider concerns, brand CDS as quality initiative, serve as final decision maker	CMO, CMIO, VPMA	
<input type="checkbox"/> IT Project Manager	Represent IT, contribute IT knowledge, gauge feasibility of software functionality	CIO, VP Medical Informatics, Imaging Informatics Director	
<input type="checkbox"/> Ambulatory Physician Executive	Represent physicians, champion CDS in ambulatory setting	Medical group executive, ACO executive	

Larger Input Team

	Role	Potential Team Members	Team Member Name(s)
<input type="checkbox"/> Clinical Expert(s)	Represent each specialty, champion CDS to peers	Physician representatives from all ordering specialties	
<input type="checkbox"/> Operational Leader(s)	Integrate CDS into scheduling, work with referring providers when submitting imaging orders	Scheduling leaders, preauthorization leaders	
<input type="checkbox"/> IT Personnel	Work with vendor to implement IT, address integration and workflow	Software engineer, clinical analytics manager	
<input type="checkbox"/> Physician Group Leaders	Represent all ordering physician groups' interests	Radiology chair, leaders of referring practices	
<input type="checkbox"/> Finance Leaders	Evaluate financial impact, budget appropriately, address Medicare billing changes	CFO, VP Finance, Revenue cycle manager	
<input type="checkbox"/> Payer Contract Negotiator	Present evidence of ability to manage imaging utilization when renegotiating contracts	VP Revenue Cycle, Director of Managed Contracts	
<input type="checkbox"/> Quality Leader(s)	Integrate CDS into larger institutional quality initiatives	CQO, VP Quality, patient safety officer, imaging quality manager	
<input type="checkbox"/> Other:			



CDS Stakeholder Conversation Guide

Resource Description

This resource outlines common concerns stakeholders will express about CDS, as well as related conversation prompts to respond

Use This Resource to:

Prepare for effective, compelling conversations with stakeholders, particularly referring providers, to secure engagement in CDS. This page outlines general concerns, the next by physician specialty.

Financial Concerns

Conversation Prompts



CDS will reduce imaging utilization and hurt revenue



CDS helps organizations gain market share by increasing their ability to accommodate new patients and demonstrating high quality to referring providers



The CMS deadline is 2020, so CDS is not a priority yet



Successful CDS implementation is a long process that starts with changing a culture, so organizations should start now or risk financial consequences in 2021

Workflow Concerns

Conversation Prompts



CDS burdens ordering providers and impedes workflow



When ordering appropriately, CDS requires minimal extra time and can speed up patient care by streamlining authorization



I heard the system is non-intuitive and doesn't integrate with our EHR



Most vendors are able to integrate with major EHRs; we will work with clinicians, IT, and our vendor to optimize the ordering workflow



We already have to do preauth, and now this is a double burden



If we can demonstrate successful utilization management, we can negotiate to bypass preauthorization as some early CDS adopters have done



CDS could suggest an imaging exam not available at my site



Providers should continue using clinical judgement; leaders don't expect full adherence to the criteria especially when the appropriately scored exams aren't applicable

Clinical Concerns

Conversation Prompts



CDS removes the "art of medicine" and cannot incorporate nuances of patient care



CDS is an educational tool meant to help providers make the best care decisions, not replace physician expertise



If I use CDS in front of my patients I will look distracted



Providers can use CDS to engage patients by showing them why a certain exam is clinically (un)necessary, promoting better shared decision making and patient engagement





I want to see my performance in relation to that of my peers



We will distribute CDS reports and provide ongoing support



Specialists Concerns

Conversation Prompts

	I'm a clinical expert in my field; I know research not yet incorporated into national guidelines	→	We can incorporate those best practices into our customized guidelines so they are available to your peers; CDS is not meant to replace physician expertise
	I have a highly specialized practice and know the appropriate imaging exams for my patients	→	CDS provides guidance in situations where you need to order outside of your specialty, for example when treating a patient with multiple chronic conditions ¹



Emergency Medicine Concerns

Conversation Prompts

	The ED is already at capacity, I can't risk decreasing throughput by taking time to use	→	CDS can actually improve ED imaging capacity by reducing inappropriate exam volumes ²
	I order multiple exams to reduce my risk of malpractice liability	→	Evidence-based guidelines justifies care decisions, reducing potential need for defensive medicine

Primary Care, Hospitalist Concerns

Conversation Prompts

	CDS is unnecessary because the imaging department checks my orders when protocoling	→	Order reworks contributes to wasted referring provider and imaging admin time; CDS will streamline this process at point of order ³
	I stay updated on imaging guidelines, I don't need a tool informing care decisions	→	You serve diverse patient populations, CDS delivers updated imaging guidelines for all patients reducing non-billable time spent reviewing literature ⁴

1) 66% of Medicare population suffers from at least two chronic conditions

2) 20% projected 10-year ED imaging growth according to Advisory Board Market Scenario Planner.

3) Up to 20% of primary care orders may require rework according to Asheville Radiology internal analysis.

4) During Medicare Imaging Demonstration, 37% of primary care providers ordered exams for five or more body parts, compared to just 9% of specialists.

Source: Asheville Radiology, Asheville, NC; The Medicare Chronic Conditions Dashboard, CMS.gov; Medicare Imaging Demonstration, CMS.gov; 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



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



Ensure **provider adherence** and conduct **data analysis**

- Action Steps
- Read the *Provider Adherence and Data Analysis Research Brief* for best practices in delivering provider reports and analyzing CDS data
 - Use the *Provider Adherence and Data Analysis Compendium* for support in developing provider reports, identifying physicians outliers, and tracking metrics
 - Understand potential imaging volume shifts with the *CDS Volume Impact Analysis*



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

