



Stony Brook
Medicine



CareSelect Imaging Overview

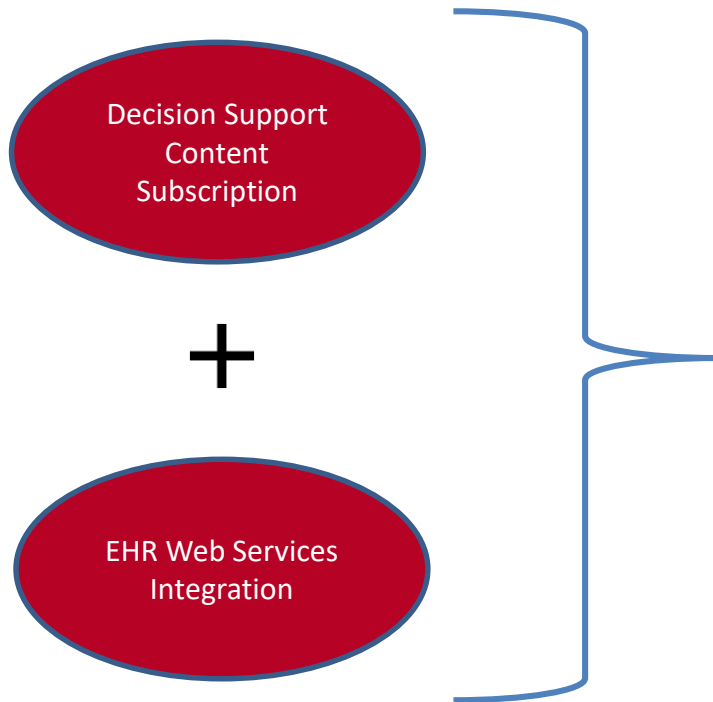
Order Driven Workflow



- Protecting Access to Medicare Act (PAMA) requires referring providers to consult appropriate use criteria (AUC) prior to ordering advanced diagnostic imaging services including CT, MRI, Nuclear Medicine, and PET.
- The law does not mandate ordering providers to strictly adhere to the AUC, it only mandates consulting AUC.
- National Decision Support Company *CareSelect* tool will be utilized as clinical decision support system
- Will be integrated into the Cerner EHR system to ensure that all orders comply with the mandate.



CareSelect delivers appropriate use criteria for imaging services directly in the physician's ordering workflow



The screenshot shows a clinical decision support interface for a patient named Medical, Student106, Male, 30 Years old, with MRN: 99901436. The exam being evaluated is "CT-Head Routine with IV Contrast".

Search for a Reason for Exam: Evaluate for aneurysm. Suggested result: Cerebral aneurysm, follow-up.

Results focused on Evaluate for aneurysm (0) [Reset]

Results related to Evaluate for aneurysm (4)

- Aneurysm, precerebral arteries
- Aneurysmal bone cyst
- Cerebral aneurysm, follow-up
- Cerebral aneurysm screening, genetic risk

Appropriateness for a 30 Year Old Male

Requested Exam: View Evidence for Exams

- CT-Head Routine with IV Contrast**: Appropriateness score 3. Cost: \$\$\$\$. Radiation: 3. Buttons: Confirm & Order, Cancel Order.
- Appropriate Exams:**
 - CT-Head Angiogram without and with IV Contrast**: Appropriateness score 8. Cost: \$\$\$\$. Radiation: 4. Button: Replace & Order.
 - MRA-Head without IV Contrast**: Appropriateness score 8. Cost: \$\$\$\$. Button: Replace & Order.
 - MRA-Head without IV Contrast Followed by Contrast**: Appropriateness score 8. Cost: \$\$\$\$. Button: Replace & Order.
 - MRI-Brain without and with IV Contrast**: Appropriateness score 5. Cost: \$\$\$\$. Button: Replace & Order.

Close



- The order-driven workflow begins with a selected exam, asks for a reason for the exam, and scores the exam and appropriate alternatives based on Appropriateness Criteria from the American College of Radiology
- This workflow is utilized in the natural ordering workflow when the ordering professional knows what they want to order



Add a new order
(CT, MRI, NM,
PET)

The screenshot displays a medical software interface for a patient named Student106. The top header shows patient information: Medical, Student106, DOB: 1/1/1990, Age: 30 years, Sex: Male, MRN: 99901436, Loc: 18N - Observation Unit. Below this, there are tabs for 'Orders', 'Medication List', and 'Document In Plan'. A search bar contains 'ct head'. A list of diagnostic orders is displayed, including 'CT-Head Angiogram without and with IV Contrast', 'CT-Head Routine without and with IV Contrast', and 'CT-Head Routine with IV Contrast'. A red arrow points to the search bar. The interface also includes a left sidebar with navigation options like 'Radiology Viewpoint', 'Orders', and 'Medication List', and a bottom section for 'Orders for Signature' and 'Details'.



The CDS window will present for in scope modalities

Medical, Student106 Male 01-JAN-1990 30 Years MRN: 99901436

Cancel CT-Head Routine with IV Contrast

Clinical Decision Support for
CT-Head Routine with IV Contrast

Search for a Reason for Exam

Evaluate for aneurysm

[Search Tips](#) [I Can't Find a Match](#)

Results focused on Evaluate for aneurysm (0) [Reset](#)

Results related to Evaluate for aneurysm (4)

- Aneurysm, precerebral arteries
- Aneurysmal bone cyst
- Cerebral aneurysm, follow-up
- Cerebral aneurysm screening, genetic risk

NATIONAL DECISION SUPPORT COMPANY

Close

NOTE: If you see this CDS screen pop-up and then disappear quickly, it is an indication that the order you placed requires no additional steps. Simply sign your order as normal.



Select the desired indication from the Common Indications list



If the desired indication is not present, type in the "Please select a reason for exam" box to display additional reasons



Select the desired reason from either list

Medical, Student106 Male 01-JAN-1990 30 Years MRN: 99901436

Cancel CT-Head Routine with IV Contrast

Clinical Decision Support for
CT-Head Routine with IV Contrast

Search for a Reason for Exam

headache

[Search Tips](#) [I Can't Find a Match](#)

Results focused on **headache** (14) [Reset](#)

- Carotid or vertebral dissection suspected
- Headache, abnormal ICP suspected
- Headache, cancer or immunocompromise
- Headache, chronic, no new features
- Headache, chronic, with new features
- Headache, cluster/trigeminal
- Headache, infection suspected
- Headache, intracranial hemorrhage suspected



If the desired reason cannot be located, select "I Can't Find a Match"



Enter your feedback regarding missing indication. Select "Yes, Submit Order"

Cancel CT-Head Routine with IV Contrast

Clinical Decision Support for
CT-Head Routine with IV Contrast

Search for a Reason for Exam

headache

[Search Tips](#) [I Can't Find a Match](#)

Results focused on **headache** (14) [Reset](#)

- Carotid or vertebral dissection suspected
- Headache, abnormal ICP suspected
- Headache, cancer or immunocompromise
- Headache, chronic, no new features
- Headache, chronic, with new features
- Headache, cluster/trigeminal
- Headache, infection suspected
- Headache, intracranial hemorrhage suspected
- Headache, neuro deficit
- Headache, post traumatic

Enter a Free Text Indication X

Enter a reason for exam*

headache

Why are the displayed indications not satisfactory?

Please add detail to help us improve

There are no appropriate use criteria associated with free text indications.
Do you wish to proceed?

[Yes, Submit Order](#) [Cancel](#)



A dynamic list of potential exams will populate along with other, relevant information



To review evidence, select “View Evidence for Exams” at the top of the exam review pane

Medical, Student106 Male 01-JAN-1990 30 Years MRN: 99901436

Appropriateness for a 30 Year Old Male

[View Evidence for Exams](#) ←

— Requested Exam —

CT-Head Routine with IV Contrast

4

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☠ ☠ ☠ ☠ ☠

Confirm & Order Cancel Order

— Appropriate Exams —

CT-Head Routine without IV Contrast

8

\$\$\$\$

☠ ☠ ☠ ☠ ☠

Replace & Order

MRI-Brain without and with IV Contrast

7

\$\$\$\$

Replace & Order

MRI-Brain without IV Contrast

7

\$\$\$\$

Close



The link redirects you to the ACR evidence pages for selected criteria



When you're finished reviewing the evidence, close the window to return to PowerChart

Edit View Favorites Tools Help

CareSelect™

Provide Feedback

Date of origin: 1996
Last review date: 2013

American College of Radiology
ACR Appropriateness Criteria®

Clinical Condition: Headache
Variant 1: Chronic headache. No new features. Normal neurologic examination.

Radiologic Procedure	Rating	Comments	RRL [±]
MRI head without and with IV contrast	4		0
MRI head without IV contrast	4		0
CT head without IV contrast	3		☹☹☹
CT head without and with IV contrast	3		☹☹☹
CT head with IV contrast	3		☹☹☹
MRA head without and with IV contrast	2		0
MRA head without IV contrast	2		0
Arteriography cervicocerebral	2		☹☹☹



The original exam will be listed on the top highlighted in yellow. Confirm by selecting "Confirm & Order"



You may also replace the original exam with a more appropriate exam

Medical, Student106 Male 01-JAN-1990 30 Years MRN: 99901436

Appropriateness for a 30 Year Old Male

[View Evidence for Exams](#)

— Requested Exam —

CT-Head Routine with IV Contrast

██████████ 4

\$\$\$\$

☢☢☢☢☢

[Confirm & Order](#) [Cancel Order](#)

— Appropriate Exams —

CT-Head Routine without IV Contrast

██████████ 8

\$\$\$\$

☢☢☢☢☢

[Replace & Order](#)

MRI-Brain without and with IV Contrast

██████████ 7

\$\$\$\$

[Replace & Order](#)

MRI-Brain without IV Contrast

██████████ 7

☺☺☺☺

[Close](#)



If you choose an exam that scores 3 or below, you will be asked to choose the reason for the selection



After selecting the reason from the list, you will have the option to provide additional comments



Select "Submit" to continue

The screenshot shows a web-based interface for ordering medical exams. A modal dialog box is open, displaying the following text:

Please confirm ordering the following exam:
CT-Head Angiogram without and with IV Contrast (score: 2)

Please choose an acknowledgement reason before proceeding:

- Consulted with Care Team
- Disagree With Appropriateness Score
- Complex Patient Condition
- Other

Comment:

At the bottom of the dialog are two buttons: **Submit** and **Cancel**. In the background, a list of exams is visible, including 'CT-Head R...', 'CT-Head A...', and 'MRA-Head...', each with a score of '\$\$\$\$' and a radiation warning icon. A 'Close' button is located at the bottom center of the screenshot.



After submitting, the indication selected during decision support will display in the free text reason for exam field



The order will be assigned a decision support number (AUC DSN) and an appropriateness score (AUC Score)



Exams scoring 3 and below will populate the acknowledgement reason and acknowledgement reason comment fields



Complete any additional order information and sign the order

[+ Add](#) | [Document Medication by Hx](#) | [Reconciliation](#) | [Check Interactions](#) | [External Rx History](#) | [Rx Plans \(0\): No Benefit Found](#)

Reconciliation Status: [Meds History](#) | [Admission](#) | [Discharge](#)

Orders | Medication List | Document In Plan

Search: | [Advanced Options](#) | Type:

[Up](#) | [Home](#) | [Favorites](#) | [Folders](#) | [Copy](#) | Folder: Order Sets/PowerPlans/Common | Search within:

Orders for Signature

Order Name	Status	Start	Details
18N - Observation Unit; R018; D Enc #:009999001936 Admit: 12/15/2019 13:55 EST			
Radiology <input type="checkbox"/> MRI-Brain without an... Order 3/26/2020 09:04 EDT 3/26/2020 09:04 EDT, Routine, Reason for Exam: Headache, abnormal ICP suspected, Clinical History: Headache, P...			

Details for MRI-Brain without and with IV Contrast

[Details](#) | [Order Comments](#) | [Diagnoses](#)

*Reason for Exam:

*Suspected CVA: Yes No

*Clinical History:

Enter at least 5 non-blank characters in Cli...

Comments:

Pregnancy status (from Physician Patient Factors):

Contact Name:

Contact Relationship:

Contact Phone:

Pertinent Previous Studies (Body Site/Date):

AUC DSN:

AUC Score:

AUC Acknowledgement Reason:

AUC Acknowledgement Reason Comment:

0 Missing Required Details | [Dx Table](#) | [Orders For Cosignature](#) | [Orders For Nurse Review](#)

[Sign](#)