

January 2023

Dear Doctor

CAD Care Programme update and Invasive Angiogram Benefit request changes applicable to all members with low to intermediate risk of coronary artery disease

Seven years ago, the South African Society of Cardiovascular Intervention (SASCI) and Discovery Health launched the Coronary Artery Disease Care (CAD Care) Programme to enable innovative value-based care for patients with low to intermediate risk of coronary artery disease. During this time, leading global healthcare systems have updated care delivery guidelines following the publication of several important CAD Care studies. These studies have been discussed in a webinar led by SASCI and highlighted in Discovery Health's CAD Care Programme and benefit update communication and webinars. A summary of pertinent publications and references has been made available to cardiologists and is attached as *Appendix 1* of this letter.

In acknowledgement of these trends, radiologists have invested in upgrading their technology and enhanced their interpretation capabilities for computed tomography coronary angiography (CTCA). CTCA training is also now included in the academic training curriculum for radiology. These factors contribute to the national acceptance of CTCA as standard of care.

The CAD Care Programme has supported infrastructural development and provided innovative funding that assists in Cardiologists in keeping pace with care delivery trends. The CAD Care Programme, in pursuit of improved clinical outcomes has incorporated these advances and updated to the CAD Care programme and medical scheme benefits to take effect from the 13 January 2023.

All participating schemes now pay for CTCAs in full

All medical schemes participating in the CAD Care Programme will from 13 January 2023 fund CTCA requests in full for low to intermediate risk patients as part of a revised payment pathway to keep up with care delivery trends.

The CAD Care agreement applies to these schemes

- Discovery Health Medical Scheme plans, **including these KeyCare plans:**
 - KeyCare Plus
 - KeyCare Core
- All closed medical schemes Discovery Health administers including
 - LA KeyPlus
 - TFG Health
- But excluding :
 - Anglo Medical Scheme
 - Netcare Medical Scheme
 - Libcare

Angiogram funding for low/intermediate risk cases will require a CTCA recommendation

The referral algorithm and treatment modality remain at the discretion of the referring cardiologists. However, from 13 January 2023 funding for a low-risk to intermediate-risk invasive angiography will be provided only when the benefit request is accompanied by a CTCA recommendation, where the CTCA is not contraindicated. All stable patients with cardiac chest pain whose pre-imaging findings indicate a **low to intermediate** likelihood of CAD, will have access to a CTCA, funded by all participating medical schemes.

We have simplified the benefit application process for invasive angiography

We have engaged extensively with the Radiological Society of South Africa (RSSA) to develop a simple template that the radiology practice will provide to the cardiologists to facilitate benefit management. Practices can assist their patients in accessing funding on the Discovery Connected Care communication platform in the following manner:

Benefit Authorisation process for practices registered on the CAD Care Programme

- Benefit authorisation for an invasive angiogram is available in real time on HealthID/Connected care, where clinically appropriate. A step-by-step guide on how to navigate the screens is available in *Appendix 4*.
- As part of the CAD Care Programme, participating practices will also qualify for preferential reimbursement upon completion of the mandatory fields in the CAD Care discharge summary (for low to intermediate risk patients that were admitted in hospital post the invasive angiogram procedure). A step-by-step guide on how to navigate the screens is available in *Appendix 5*.
- For certain patient groups, the participating cardiologist has the discretion to proceed directly to an invasive angiogram if they think it is necessary. Decisions will be subject to SASCI review as stewards of the CAD Care Programme.
- CTCA funding is automatically available where a claim includes the codes listed in *Appendix 2*. Guidance on the coding is mentioned in *Appendix 3*.
- We will regularly share data through monthly reports to individual cardiologists. The report shows the practice size, demographics of your patients, angiogram use and CAD Care Programme experience. We share this data to support cardiologists in:
 - Understanding their patients' use of the healthcare system.
 - Enabling self-reflection by comparing their practice to that of their peers.
 - Facilitating peer-to-peer conversations to identify areas of positive change if any exist.
 - Improving patient outcomes.

Benefit authorisation process for non-participating practices (practices that don't take part in the CAD Care Programme)

- The practice will also access the benefit authorisation for an invasive angiogram in real time on HealthID/Connected care, where clinically appropriate. A step-by-step guide on how to navigate the screens is available in *Appendix 4*. Alternatively, traditional channels will still be made available, such as:
 - The benefit pre-authorisation call centre or
 - The hospital's electronic interface with Discovery Health (B2B system)
- A CTCA report recommendation will be required (for low-to intermediate risk patients) to access funding for the invasive angiogram

High-risk CAD patients with known disease will continue to access immediate payment for invasive procedures. These include patients with:

- Current or history of ACS
- Acute myocardial infarction (STEMI and NSTEMI)
- Unstable angina
- Previous positive angiogram
- Previous stents
- Previous CABG

- Biomarkers suggesting cardiac injury
- Pregnant women

Updates to the CAD Care Programme

As the CAD Care Programme evolves, we refresh reimbursement model to share accrued value with participating practices.

The CAD1 episode fees will be enhanced from 13 January 2023 as follows:

	CAD1	CAD1 for KeyCare plans
Participating practices*	R17,996.10	R15,617.60
New option for non-participating practices* as an optional alternative to fee-for-service and direct payment arrangement billing	R10,797.70	R9,370.50

*Existing patient entry criteria will continue to apply for the programme.

Quality and cost-effectiveness of care are the primary drivers of this CAD Care Programme, therefore all participating cardiologists agree to share relevant clinical information to allow the nominated SASCI committee to do a peer review.

If you could not attend the various information and training webinars that were hosted by Discovery health or would like more information about the CAD Care Programme, please contact us at healthpartnerinfo@discovery.co.za. A representative will then arrange to meet with you to share details specific to your practice and answer any questions you have.

We thank you for your ongoing engagement on this programme.

Regards



Darren Sweidan
Head: Health Professional Unit
Strategic Risk Management
Discovery Health

Appendix 1

2021 AHA/ACC/ASE/CHEST/SAEM/SCCT/SCMR Guideline for the evaluation and diagnosis of chest pain

2019 ESC Guidelines for the diagnosis and management of chronic coronary syndromes

- **Class I recommendation:** Non-invasive functional imaging for myocardial ischaemia or coronary CTA is recommended as the initial test for diagnosing CAD in symptomatic patients in whom obstructive CAD cannot be excluded by clinical assessment alone.
- **Class I recommendation:** It is recommended to base the selection of the initial non-invasive diagnostic test on:
 - The clinical likelihood of CAD and other patient characteristics that influence test performance
 - Local expertise
 - The availability of tests.
- **Class I recommendation:** Functional imaging for myocardial ischaemia is recommended if coronary CTA has shown CAD of uncertain functional significance or is not diagnostic.
- **Class IIa recommendation:** Coronary CTA should be considered as an alternative to invasive angiography if another non-invasive test is equivocal or non-diagnostic.

NICE – 2016

- “Stress testing has relatively low sensitivity and specificity for diagnosing CAD in this group of people. Therefore, a significant proportion of at-risk people are missed while others with normal coronary arteries are subjected to an unnecessary invasive coronary angiogram.”
- “Multi-slice CT coronary angiography is highly sensitive and provides a potentially useful means for early rule-out of CAD in troponin-negative acute coronary disease.”

NICE – 2017

- The Updated Guidelines: Cardiac CT as the First-line Test for Coronary Artery Disease
- [Cur Cardiovasc Imaging Rep.](#) 2017; 10(5): 15.
- Published online 27 March 2017. doi: [10.1007/s12410-017-9412-6](https://doi.org/10.1007/s12410-017-9412-6)
- PMID: PMC5368205

SCOT-HEART study

Randomised >4,000 multicentre stable chest pain suspected angina, Standard care vs standard care + CTA
CTA: changed diagnosis in 1 in 4 of cases; changed investigations in 1 in 6; changed treatment in 1 in 4

- Identified 85% with CAD
- Identified 90% with NO CAD
- **Reduced fatal and nonfatal MI by 38% at average 1.7 years** (page 5)
- Identified 85% with CAD
- Identified 90% with NO CAD

PROMISE trial

>10,000 symptomatic low/intermediate risk; typical angina 12%

Randomised prior to angiography to:

- Anatomical test (CTA) vs Functional test (stress echo 24%: nuclear 72%)
- CTA had more ICA
- CTA had less normal ICA
- In other words detection rate higher with CTA
- The discriminatory ability of CTA in predicting events was significantly better than functional testing

Appendix 2 – CTCA funding is available for the following conditions:

ICD-10 code	ICD - 10 code description
I10	Essential (primary) hypertension
I11.0	Hypertensive heart disease with (congestive) heart failure
I11.9	Hypertensive heart disease without (congestive) heart failure
I12.0	Hypertensive renal disease with renal failure
I12.9	Hypertensive renal disease without renal failure
I13.0	Hypertensive heart and renal disease with (congestive) heart failure
I13.1	Hypertensive heart and renal disease with renal failure
I13.2	Hypertensive heart and renal disease with both (congestive) heart failure and renal failure
I13.9	Hypertensive heart and renal disease, unspecified
I15.0	Renovascular hypertension
I15.1	Hypertension secondary to other renal disorders
I15.2	Hypertension secondary to endocrine disorders
I15.8	Other secondary hypertension
I15.9	Secondary hypertension, unspecified
I20.8	Other forms of angina pectoris
I20.9	Angina pectoris, unspecified
I25.0	Atherosclerotic cardiovascular disease, so described
I25.1	Atherosclerotic heart disease
I25.5	Ischaemic cardiomyopathy
I25.8	Other forms of chronic ischaemic heart disease
I25.9	Chronic ischaemic heart disease, unspecified
I27.0	Primary pulmonary hypertension
I27.1	Kyphoscoliotic heart disease
I27.2	Other secondary pulmonary hypertension
I27.8	Other specified pulmonary heart diseases
I27.9	Pulmonary heart disease, unspecified
I28.8	Other specified diseases of pulmonary vessels
I28.9	Disease of pulmonary vessels, unspecified
I44.0	Atrioventricular block, first degree
I44.7	Left bundle-branch block, unspecified
I45.2	Bifascicular block
I45.6	Pre-excitation syndrome
I45.8	Other specified conduction disorders
I45.9	Conduction disorder, unspecified
I47.0	Re-entry ventricular arrhythmia
I47.1	Supraventricular tachycardia
I47.2	Ventricular tachycardia
I47.9	Paroxysmal tachycardia, unspecified
I48.0	Paroxysmal atrial fibrillation
I48.1	Persistent atrial fibrillation
I48.2	Chronic atrial fibrillation
I48.3	Typical atrial flutter
I48.4	Atypical atrial flutter
I48.9	Atrial fibrillation and atrial flutter, unspecified

I49.0	Ventricular fibrillation and flutter
I49.1	Atrial premature depolarisation
I49.2	Junctional premature depolarisation
I49.3	Ventricular premature depolarisation
I49.4	Other and unspecified premature depolarisation
I49.5	Sick sinus syndrome
I49.8	Other specified cardiac arrhythmias
I49.9	Cardiac arrhythmia, unspecified
I50.1	Left ventricular failure
R07.1	Chest pain on breathing
R07.2	Precordial pain
R07.3	Other chest pain
Z13.6	Special screening examination for cardiovascular disorders - Codes for pre transplant workup

Appendix 3

Guidance for capturing the ICD-10 codes for CAD

This section outlines three groups of ICD-10 code diagnosis that if added as primary ICD-10 codes would result in a failed validation at the benefit authorisation request submission stage. These codes include the Z ICD-10 codes, asterisk codes and ICD-10 codes related to injury, poisoning and certain consequences of external causes (S & T codes).

1. Factors influencing health status and contact with health services (Z00-Z99)

Certain Z ICD-10 codes are status codes and are not permissible in the primary position for in hospital authorisations. If these codes are selected, the provider will receive an upfront validation failure, with the following message: **“This is a non-permissible code”**. Please resubmit with an appropriate code when assigning one of the following Z95.- codes. It is however essential that you add this code as an additional code where appropriate as it provides important information.

Below is an example where adding the Z ICD-10 code as an additional code is useful

Primary code: R07.1 (Chest pain on breathing)

Secondary/additional code: Z95.0 (Presence of cardiac pacemaker)

List of Z ICD-10 codes that could be added as secondary/ additional codes where appropriate

Z95.0	Presence of cardiac pacemaker
Z95.1	Presence of aortocoronary bypass graft
Z95.2	Presence of prosthetic heart valve
Z95.3	Presence of xenogenic heart valve
Z95.4	Presence of other heart-valve replacement
Z95.5	Presence of coronary angioplasty implant and graft
Z95.8	Presence of other cardiac and vascular implants and grafts
Z95.9	Presence of cardiac and vascular implant and graft, unspecified

Please note that you will be able to use Z13.6 (Special screening examination for cardiovascular disorders) in the primary position, as certain screening examinations are allowed in the primary position for an in-hospital authorisations.

Z01.8 (Other specified special examinations), will be removed for the CAD Care list as it is not permissible in the primary position for in-hospital authorisations.

2. Asterisk codes:

The dagger and asterisk coding convention allows the description of a condition in terms of its underlying cause (+) and current manifestation (*). Asterisk codes are not permissible in the primary position and are to be preceded by a dagger code. We will be removing the following asterisk codes as most of the underlying conditions have not been catered for in the CAD Care initiative.

Example:

Primary code: M05.30 (Rheumatoid arthritis with involvement of other organs and systems, multiple sites)

Secondary/additional code: I39.3 (Pulmonary valve disorders in diseases classified elsewhere)

M05.30 is not on the CAD Care list. You will however be able to capture this code set as additional codes.

The following codes will be removed from the CAD Care list:

I39.0	Mitral valve disorders in diseases classified elsewhere
I39.1	Aortic valve disorders in diseases classified elsewhere
I39.2	Tricuspid valve disorders in diseases classified elsewhere
I39.3	Pulmonary valve disorders in diseases classified elsewhere
I39.4	Multiple valve disorders in diseases classified elsewhere
I39.8	Endocarditis, valve unspecified, in diseases classified elsewhere
I41.0	Myocarditis in bacterial diseases classified elsewhere
I41.1	Myocarditis in viral diseases classified elsewhere
I41.2	Myocarditis in other infectious and parasitic diseases classified elsewhere
I41.8	Myocarditis in other diseases classified elsewhere

3. Injury, poisoning and certain other consequences of external causes (S00-T98)

ICD-10 codes for “Injury, poisoning and certain other consequences of external causes (S00-T98)”, require additional external cause codes (ECCs). If a code for “Injury, poisoning and certain other consequences of external causes” is assigned without an external cause code, the following message will display: “Injury and poisoning codes (S and T codes) must be coded in combination with an external cause code (V, W, X or Y).”

ECCs permit the classification of environmental events, circumstances and conditions as the cause of injury, poisoning and other adverse effects.

Example:

Primary code: T82.0 (Mechanical complication of heart valve prosthesis)

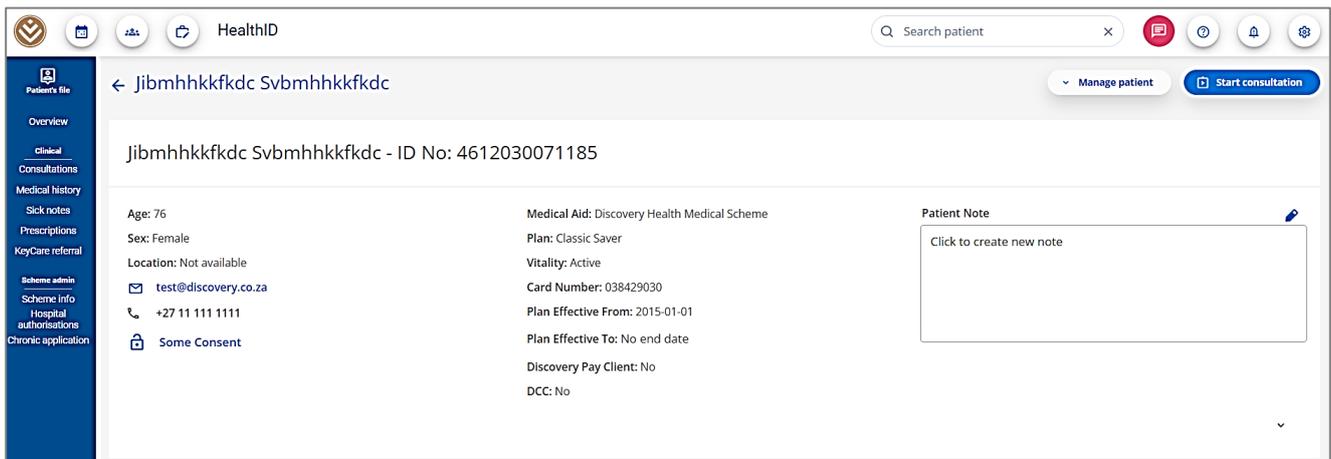
Secondary/additional code: Y83.1 (Abnormal reaction/late complication, without mention of misadventure at the time of the procedure, surgical operation with implant of artificial internal device)

Appendix 4

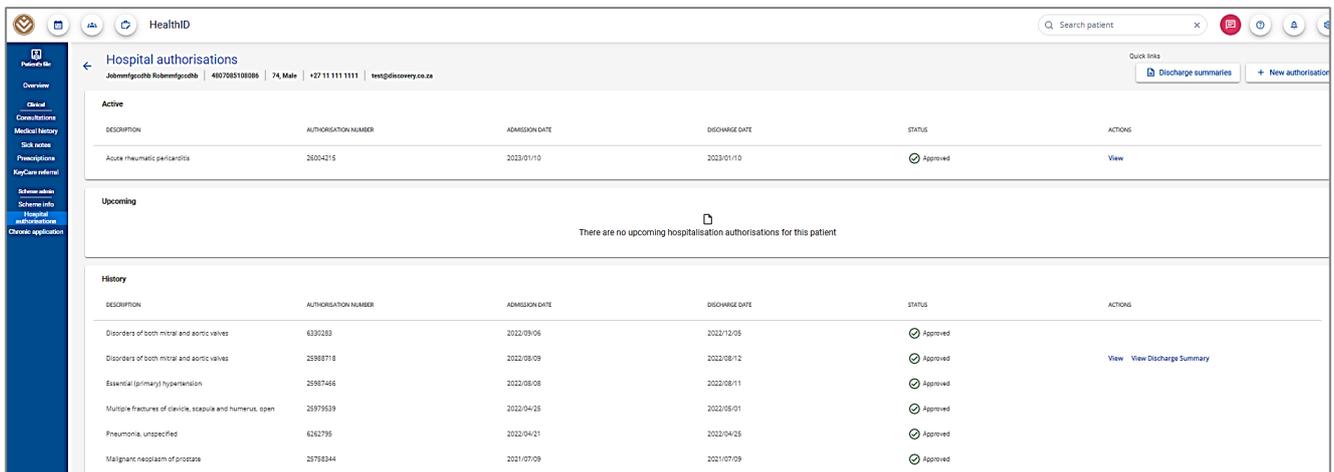
HealthID/ Connected Care Training Guide for Invasive Angiogram request for patients with Low to Intermediate Risk for Coronary Artery Disease (CAD)

CAD Authorisation for an invasive angiogram procedure

Once the provider has selected a patient that has given HealthID consent, the hospitalisation authorisation menu option will become available on the left side bar underneath the Scheme admin menu options.

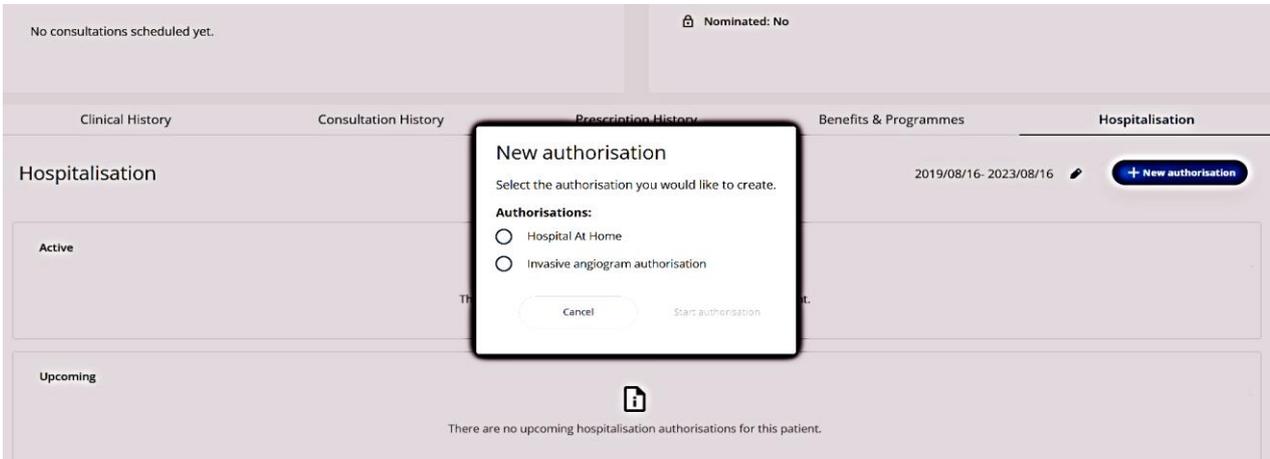


Once hospitalisation authorization menu option is selected all available options will be displayed to the provider and these include the New Authorization and Discharge summary Quick links.

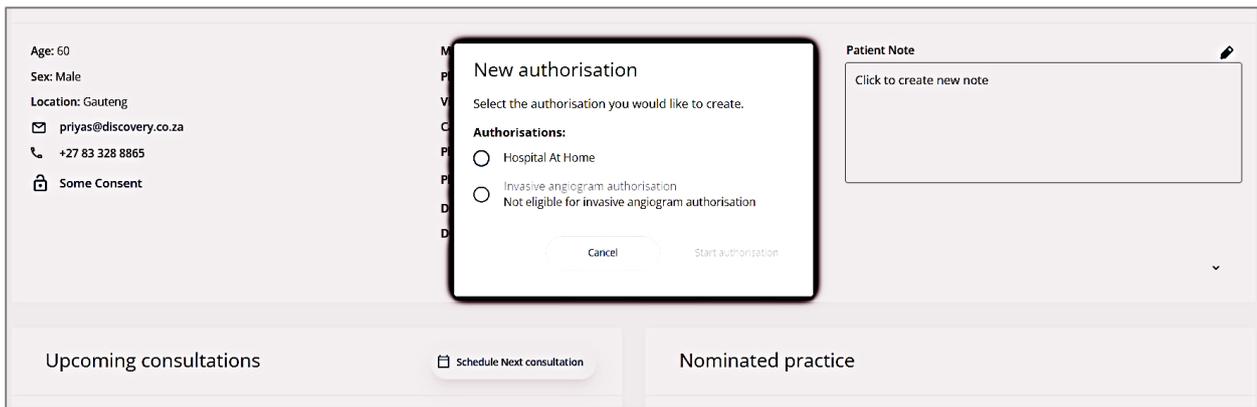


DESCRIPTION	AUTHORISATION NUMBER	ADMISSION DATE	DISCHARGE DATE	STATUS	ACTIONS
Active					
Acute rheumatic pericarditis	20204215	2023-01-10	2023-01-10	Approved	View
Upcoming					
There are no upcoming hospitalisation authorisations for this patient					
History					
Disorders of both mitral and aortic valves	6330283	2022-09-05	2022-12-05	Approved	
Disorders of both mitral and aortic valves	29888718	2022-08-09	2022-08-12	Approved	View View Discharge Summary
Essential (primary) hypertension	25987466	2022-08-08	2022-08-11	Approved	
Multiple fractures of clavicle, scapula and humerus, open	28979539	2022-04-25	2022-05-01	Approved	
Pneumonia, unspecified	6262795	2022-04-21	2022-04-25	Approved	
Malignant neoplasm of prostate	28798344	2021-07-09	2021-07-09	Approved	

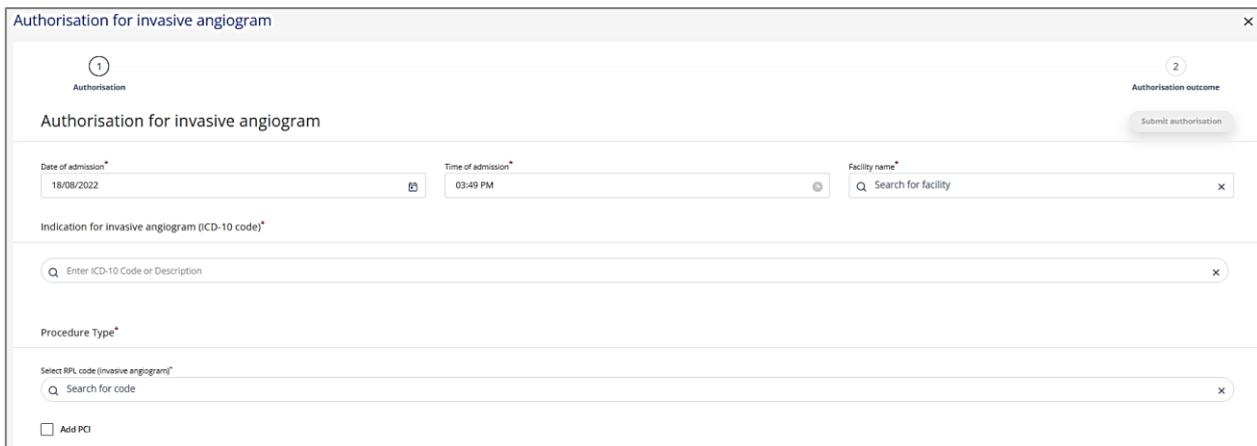
Once **the New Authorisation option is selected**, the below screen displaying an Invasive angiogram authorization checkbox as an option will appear if the member is eligible for this benefit.



If **the member is not eligible for the benefit** the screen below will display.



Once the Invasive Angiogram is selected, the Authorisation screen for Invasive Angiogram will display.



Calcium score*

Normal
 > 2000
 Not done

Stress test findings (Upload Stress ECG optional)*

Positive
 Equivocal
 Non-diagnostic
 Not done

Drag and drop a file here (Max 20mb) or

CTCA findings (Upload CTCA report optional)*

No evidence of stenosis
 Low grade coronary stenosis
 High grade coronary stenosis
 Equivocal
 Not done

Drag and drop a file here (Max 20mb) or

The following fields are mandatory for completion of the authorisation:

- Date of admission
- Time of admission
- Facility Name
- Primary ICD-10 code
- Invasive Angiogram RPL code

If a Non-Emergency CAD code is captured the following will need to be captured as well:

- Calcium score
- Stress test findings
- CTCA findings

The provider will have an option to select Multiple RPL codes if required.

Procedure Type*

Select RPL code (invasive angiogram)*

1249 | Right and left cardiac catheterisation without coronary angiography (with or without biopsy)

1253 | Right heart catheterisation (with or without biopsy)

Add PCI

Select RPL code (PCI)

1276 | Percutaneous transluminal angioplasty: First cardiologist: Single lesion

1277 | Percutaneous transluminal angioplasty: Second cardiologist: Single lesion

Only a CAD specific ICD-10 codes will be permissible in primary position. The following error message will display when the ICD-10 code placed in the primary position is not valid.

Indication for invasive angiogram (ICD-10 code)*

D12.1 Benign neoplasm, appendix

Primary

The ICD-10 code provided is not included as part of the Coronary Artery Disease initiative. Please follow the normal authorisation process.

If no Primary ICD-10 code has been selected the following message will display:

Indication for invasive angiogram (ICD-10 code)*

I10 Essential (primary) hypertension

ⓘ

Secondary

✕

ⓘ Please add a primary ICD-10 code.

Findings for the Stress ECG and CTCA

Options will be displayed to select relevant findings of the Strsss ECG and CTCA. There will also be an option to upload results as a PDF file. If the provider chooses to upload a file, only PDF files will be available for selection upon opening the windows browser. If the provider chooses to drag and drop a file that is not a PDF, the following message will display

Only pdf file allowed.

Only 1 PDF File per test will be accepted for an upload. If a second file is selected the previous file will be replaced.

Stress test findings (Upload Stress ECG optional) *

Positive
 Equivocal
 Non-diagnostic
 Not done

Drag and drop a file here (Max 20mb) or

[Upload file](#)

CAD-AuthorisationProcess-4FCW3X2.pdf
(109.44 KB) ✕

Submitting the request for Authorisation

Once the Authorisation is submitted, the ICD-10 Coding will be validated. If the diagnosis code validation fails, the below messages will display. The provider will be required to correct the ICD-10 codes to proceed to the next step.

Authorisation for invasive angiogram

1
 Authorisation

2
 Authorisation outcome

Date of admission*

Time of admission*

Validation error

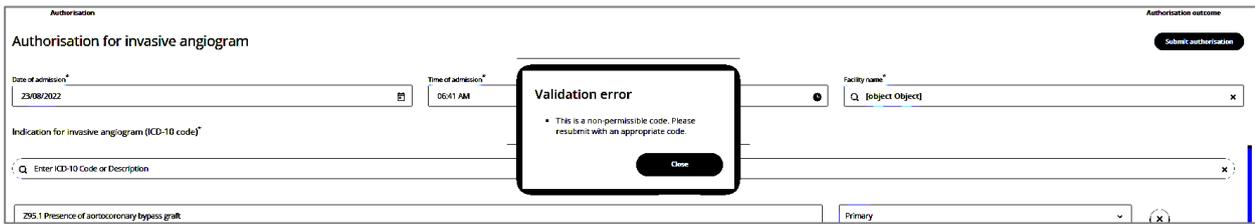
- Injury and poisoning codes (S and T codes) must be coded in combination with an external cause code (V, W, X or Y).

Done

Facility name*

Indication for invasive angiogram (ICD-10 code)*

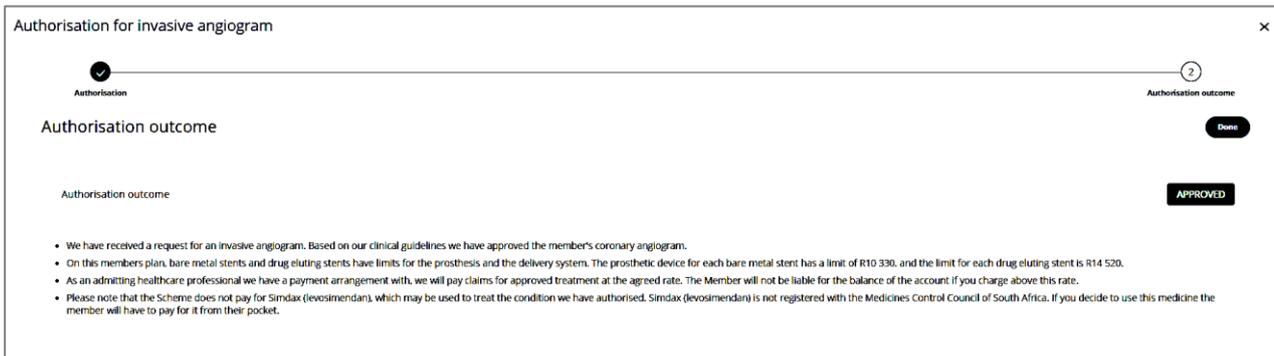
Submit authorisation



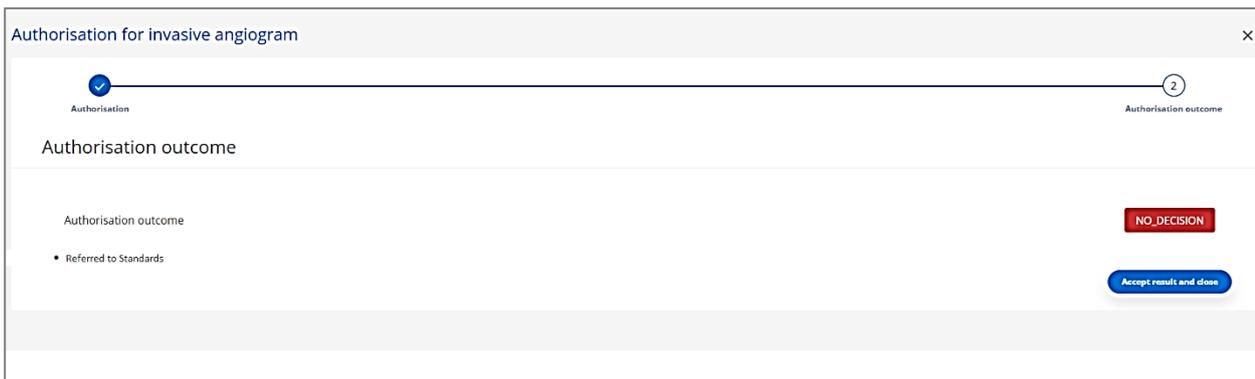
Once the diagnosis ICD-10 code validation has passed. Authorisation outcome will display. There are four possible authorisation outcomes:

- 1) Approved Authorization
- 2) No decision outcome
- 3) Declined outcome with no option to override
- 4) Declined with an option to override if the outcome is not due to plan or scheme specific rules (only available to participating providers).

Approved authorization.



No Decision authorization outcome: next action steps will be displayed



Declined authorization outcome: that cannot be overridden due to scheme or plan rules

Authorisation for invasive angiogram
✕

1
Authorisation

2
Authorisation outcome

Authorisation outcome

Authorisation outcome

DECLINED

- Cat A- 3 or 12 month WP - (No cover as member is not entitled to PMB)
- We have received a request for an invasive angiogram. Based on our clinical guidelines we have approved the member's coronary angiogram.
- I080 Is/are a Prescribed Minimum Benefit code(s). The member does not have cover for Prescribed Minimum Benefits during the waiting period.
- As an admitting healthcare professional we have a payment arrangement with, we will pay claims for approved treatment at the agreed rate. The Member will not be liable for the balance of the account if you charge above this rate.

Accept result and close

Once the outcome is accepted and the close Tab is selected, the authorization status will remain as declined.

Declined authorization outcome: that can be overridden

This option is only available to available to participating practices on the CAD Care Programme.

Authorisation for invasive angiogram
✕

1
Authorisation

2
Authorisation outcome

Authorisation outcome

Authorisation outcome

DECLINED

- We have received a request for an invasive angiogram. We have reviewed the information provided to us and based on our clinical guidelines an invasive angiogram is not indicated.
- On this members plan, bare metal stents and drug eluting stents have limits for the prosthesis and the delivery system. The prosthetic device for each bare metal stent has a limit of R10 330. and the limit for each drug eluting stent is R14 520.
- As an admitting healthcare professional we have a payment arrangement with, we will pay claims for approved treatment at the agreed rate. The Member will not be liable for the balance of the account if you charge above this rate.
- Please note that the Scheme does not pay for Simdax (levosimendan), which may be used to treat the condition we have authorised. Simdax (levosimendan) is not registered with the Medicines Control Council of South Africa. If you decide to use this medicine the member will have to pay for it from their pocket.

Explain why you would like to override the declined result. Would you like to override the result by adding a motivation?

Motivation for Authorisation

Motivation typed

Accept result and close

Submit motivation

Once the motivation has been captured and submitted the declined status will be overridden and changed to Approved.

Appendix 5

CAD Care Discharge Summary Guide: How to capture CAD Discharge Summary

Once the provider has selected a patient that has given consent, the hospitalisation authorisation menu option will be made available on the left side bar underneath the Scheme admin option.

Once the Hospital authorisation menu option is selected, the provider will have a view of all previous, Active, and Upcoming (planned) hospitalizations. The **Discharge summary** link will be visible **next to the specific hospital authorisation**. Please **do not** open the top right hand corner Discharge summary quick link. Once the discharge summary link next to the specific Hospitalisation authorisation is selected the discharge screens will open.

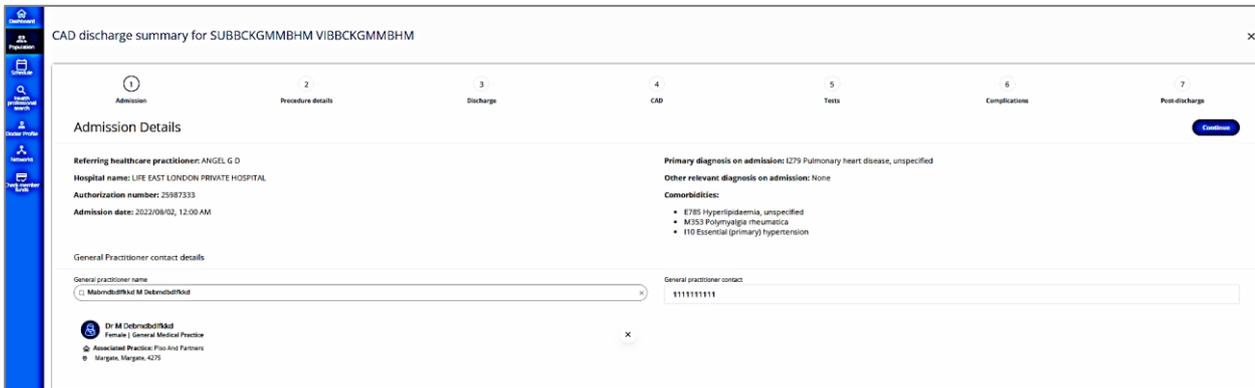
DESCRIPTION	AUTHORISATION NUMBER	ADMISSION DATE	DISCHARGE DATE	STATUS	ACTIONS
Disorders of both mitral and aortic valves	6330283	2022/09/06	2022/12/05	Approved	
Disorders of both mitral and aortic valves	25987718	2022/08/09	2022/08/12	Approved	View View Discharge Summary
Essential (primary) hypertension	25987466	2022/08/08	2022/08/11	Approved	
Multiple fractures of clavicle, scapula and humerus, open	25975639	2022/04/25	2022/05/01	Approved	
Pneumonia, unspecified	6262795	2022/04/21	2022/04/25	Approved	
Malignant neoplasm of prostate	25758344	2021/07/09	2021/07/09	Approved	

The Admission details Step

The Discharge summary screens will display all the steps the provider will need to follow including the admission information. The authorization details will be populated at the top of the page with the relevant co-morbidity conditions if applicable.

Nominated GP details will be prepopulated

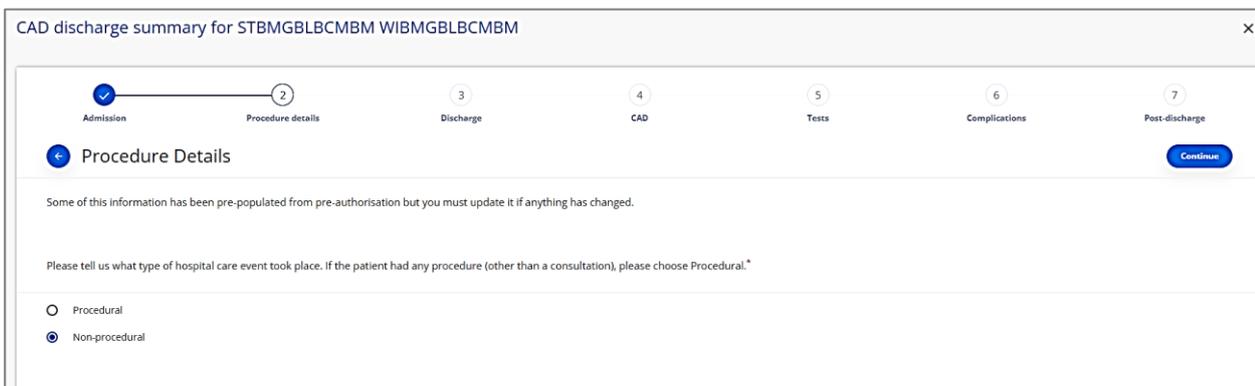
Where the details of the General practitioner (GP) nominated by the patient are known, this will be prepopulated. If this does not pre-populate, the provider has an option to select a provider from practice type 014 and 015 by searching for the GP's name.



Procedure details:

Once the Continue Tab has been selected, the procedure details page will open, this will give the Provider an option to select the relevant recent hospital care event details, indicating if it was a procedural event or non-procedural event.

Below the Provider selected a non-procedural hospital care event.



If the provider selects a Procedural hospital care event, they will be also given an option to select the RPL code from the pre-populated list that include Angiogram and Percutaneous Coronary Intervention RPL codes. They will also have an option to add multiple codes by selecting the Add Tab.

CAD discharge summary for SUBBCKGMMBHM VIBBCKGMMBHM

1 Admission 2 Procedure details 3 Discharge 4 CAD 5 Tests 6 Complications 7 Post-discharge

Procedure Details

Some of this information has been pre-populated from pre-authorisation but you must update it if anything has changed.

Please tell us what type of hospital care event took place.* If the patient had any procedure (other than a consultation), please choose Procedural.

Procedural
 Non-procedural

If the patient had a procedure (other than a consultation), select the procedure performed: + Add procedure

Procedures performed: 1277 | Percutaneous transluminal angioplasty: Second cardiologist: Single lesion Date: 15/08/2022

Procedure Details Continue

Some of this information has been pre-populated from pre-authorisation but you must update it if anything has changed.

Please tell us what type of hospital care event took place. If the patient had any procedure (other than a consultation), please choose Procedural.*

Procedural
 Non-procedural

If the patient had a procedure (other than a consultation), select the procedure performed: + Add procedure

Procedures performed: 1277 | Percutaneous transluminal angioplasty: Second cardiologist: Single lesion Date: 26/08/2022

Select a procedure 26/08/2022

Once the Continue TAB is selected, the discharge section will be displayed.

Discharge Tab

CAD discharge summary for SUBBCKGMMBHM VIBBCKGMMBHM

1 Admission 2 Procedure details 3 Discharge 4 CAD 5 Tests 6 Complications 7 Post-discharge

Discharge

Date: 05/08/2022 Time: 11:59 PM Destination: Please select

Indication for invasive angiogram (ICD-10 code)

Enter ICD-10 Code or Description

I27.9 Pulmonary heart disease, unspecified Primary
 E78.5 Hyperlipidaemia, unspecified Comorbidity
 M55.3 Polymyalgia rheumatica Comorbidity
 I10 Essential (primary) hypertension Comorbidity

Known allergies: Select allergy type

Medicines on discharge

Search for non-formulary medicine/items, applicable to plan type

Medicine has not been added to the prescription yet. Search medicine to add to prescription.

Discharge doctor's contact details

Doctor's name: Dr D Mabumbikhindi, Male | Physician, Fordsburg, Cape Town, Western Cape

Doctor's emergency contact: 1111111111

Continue

This section will give the Provider an opportunity to select the Patient education Tab, should they wish to do so. Once selected, a free text field will be displayed where more details can be captured. The diagnosis details will be pre-populated with the information that was captured at the authorization stage.

ICD 10 code information:

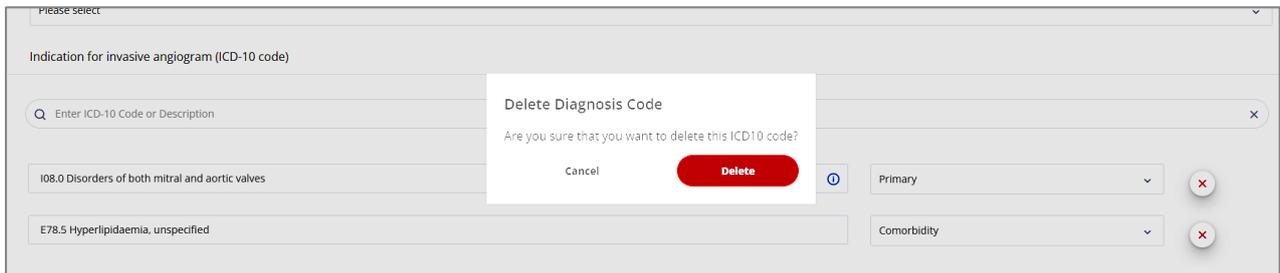
The provider will be given an option to update the diagnosis codes, however, validations will only be done once this section has been updated.

- 1) If no primary ICD-10 code exists, the following message will display

- 2) If the Primary ICD-10 code is not CAD Care related the following message will display.

The Continue TAB will be disabled until the coding has been fixed.

If the provider deletes the pre-populated diagnosis codes, the following confirmation message will display.



An option to add allergy/allergies will be made available and the provider will have an option to select multiple allergies by selecting the relevant checkboxes. Once selected this will populate in the allergy section.



Medication:

The provider will be able to search for medication required on discharge.



Medicines on discharge

Q panado

MEDICINE/ITEM NAME	ACTIVE INGREDIENT	STRENGTH	FORM	ALTERNATIVE AVAILABLE
Panado childrens	Paracetamol	125 mg	Tablets, Melt	
Panado	Paracetamol	500 mg	Capsules	
Cepacol medsip ginger (was panado medsip	Paracetamol, Combinations Excl. Psycholept	N/A	Sachet	
Panado co tablets	Codeine And Paracetamol	N/A	Tablets	
Panado	Paracetamol	500 mg	Tablets, Melt	
Panado	Paracetamol	120 mg/5ml	Syrup	

Once the chosen medication has been selected, more fields will be displayed for the provider to capture additional details such as Instructions, Quantity, Repeats and an option to select alternative medication. An option to add Multiple medications will also be available.

Medicines on discharge

MEDICINE	STRENGTH	FORM	INSTRUCTIONS	QTY	RPTS	ALLOW ALTERNATIVES
Panado	500 mg	Capsules	<input type="text" value="Start typing instruction"/>	<input type="text" value="00"/>	<input type="text" value="00"/>	<input type="checkbox"/> <input type="button" value="↕"/> <input type="button" value="✕"/>

Discharge Provider details:

The Discharge Provider details will be pre-populated with the logged in provider details. The provider will also be given an option to update contact details in this section.

Known allergies

NSRHS

Medicines on discharge

MEDICINE	STRENGTH	FORM	INSTRUCTIONS	QTY	RPTS	ALLOW ALTERNATIVES
Dealex	250 mg	Capsules	<input type="text" value="Once a month"/>	<input type="text" value="100"/>	<input type="text" value="3"/>	<input type="checkbox"/> <input type="button" value="↕"/> <input type="button" value="✕"/>

Discharge doctor's contact details

Doctor's name: **Dr D Mabumbishidi**
Male | Physician
Foreshore, Cape Town, Western Cape

Doctor's emergency contact:

Once the continue Tab has been selected the CAD Care Information section will be displayed.

CAD Information step

This section will allow the provider to capture clinical details related to the procedure. The patient's chronic medical history will prepopulate at the top of this page. All fields with the red * are mandatory and need to be completed before the continue Tab is enabled.

CAD discharge summary for SUBBCKGMMBHM VIBBCKGMMBHM

1 Admission
2 Procedure details
3 Discharge
4 CAD
5 Tests
6 Complications
7 Post-discharge

CAD information

Chronic disease history and risk factors

Chronic disease history

I10	Essential (primary) hypertension
I25.3	Polymyalgia rheumatica
E78.5	Hyperlipidaemia, unspecified

Patient information and risk factors

Age: 64
Gender: Female

Smoker*

Yes No

Strong family history of cardiovascular disease*

Yes No

Vital signs

READING TYPE	CAPTURE READING
Systolic blood pressure	<input type="text" value="Capture"/> mmHg
Diastolic blood pressure	<input type="text" value="Capture"/> mmHg

Red flags signs or symptoms*

Asymptomatic
 Yes No

Chest pain
 Yes No

Syncope
 Yes No

Shortness of breath
 Yes No

Laboratory findings

READING TYPE	CAPTURE READING	UNIT
Total Cholesterol	Capture	mmol/L
HDL Cholesterol	Capture	mmol/L
LDL Cholesterol	Capture	mmol/L
HbA1c	Capture	%
Troponin I	Capture	ng/L
Troponin T	Capture	ng/L
Hemoglobin Test	Capture	g/dL
Platelets	Capture	/uL
Creatinine	Capture	mg/dL

Cardiovascular intervention history

Previous PCI*
 Yes No

Previous CABG*
 Yes No

Pace maker*
 Yes No

Family History*

None
 AMI before age 60
 Hypertension
 Diabetes
 Hypercholesterolemia

[Continue](#)

Validations will be enabled for vital signs and laboratory findings, if the captured value is not valid an error message will display. Below is an example of an error message that could be displayed. These values would need to be fixed before the continue Tab is enabled.

Laboratory findings

READING TYPE	CAPTURE READING	UNIT
Total Cholesterol	100000	mmol/L

Error: Incorrect clinical value input - Cannot be more than 10

The Tests' findings step

The Test screen will display once the provider has completed all mandatory fields and has selected the continue Tab option. This will enable the provider to capture findings of all tests that were conducted including ECG, ECHO and CTCA.

CAD discharge summary for SUBBCKGMMBHM VIBBCKGMMBHM

Admission
 Procedure details
 Discharge
 CAD
 Tests
 Complications
 Post-discharge

Test information

ECG results*

Normal
 Abnormal
 Not done

Drag and drop file's here (Max 20mb) or Upload file

Stress ECG results (ECHO)*

Normal
 Abnormal
 Not done

Drag and drop file's here (Max 20mb) or Upload file

Calcium score*

Done
 Not done

CTCA test results*

Normal
 Abnormal
 Not done

Drag and drop file's here (Max 20mb) or Upload file

Invasive angiogram test results*

Normal
 Abnormal
 Not done

Drag and drop file's here (Max 20mb) or Upload file

[Continue](#)

If an **abnormal finding option is selected for the ECG**, an option to select the relevant check boxes with brief descriptions of the ECG findings will be made available.

ECG results*

Normal
 Abnormal
 Not done

Drag and drop a file here (Max 20mb) or Upload file

Please specify findings for abnormal results

- LVH
- Pathological Q-waves
- ST depression ≥ 0.5 mm
- T-wave inversion ≥ 2 mm
- Transient ST elevation (≥ 0.5 mm)
- Sustained ST elevation
- New LBBB
- Sustained VT

If an **abnormal finding option is selected for the stress ECG**, additional checkboxes will be made available enable the provider to capture brief specific details of the abnormal findings.

Left ventricular function
 Normal Abnormal

Pulmonary valve
 Normal Abnormal

Pericardial effusion
 Yes No

Pulmonary artery pressure
 mmHG

Ejection fraction
 %

Aortic valve
 Normal Abnormal

Mitral valve
 Normal Abnormal

Tricuspid valve
 Normal Abnormal

Ejection fraction or pulmonary artery pressure details are not mandatory, but validations will be done if captured.

Pulmonary artery pressure
 mmHG
Error: Incorrect decimal value input. Cannot be less than 0

Ejection fraction
 %

If the **Calcium score has been marked as done**, the provider will need to select the applicable score to continue

Calcium score*

Done Not done

Please select score

If an **abnormal finding is selected for the CTCA**, an option to select the relevant findings will be provided.

CTCA test results*

Normal Abnormal Not done

Please specify findings for abnormal results

Drag and drop a file here (Max 20mb) or

If an **abnormal finding is selected for the Invasive angiogram**, the relevant specific findings will need to be selected including an indication for revascularisation if it is required.

Invasive angiogram test results*

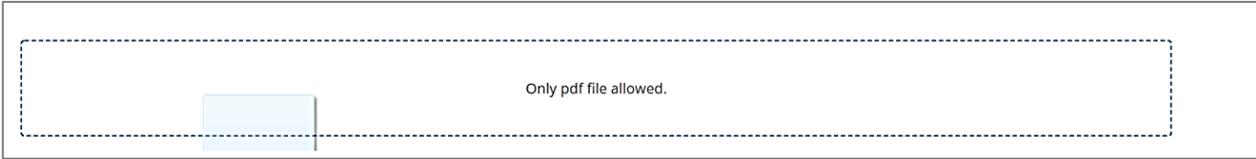
Normal Abnormal Not done

Please specify findings for abnormal results

Drag and drop a file here (Max 20mb) or

Revascularisation required?
 Yes No

The **file upload option is not mandatory**, however, if chosen, only PDF files will be allowed. Once the browser window opens, only PDF files will be available for selection. There will also be an option to drag and drop the PDF file. If a non-PDF file is chosen, the following message will be display

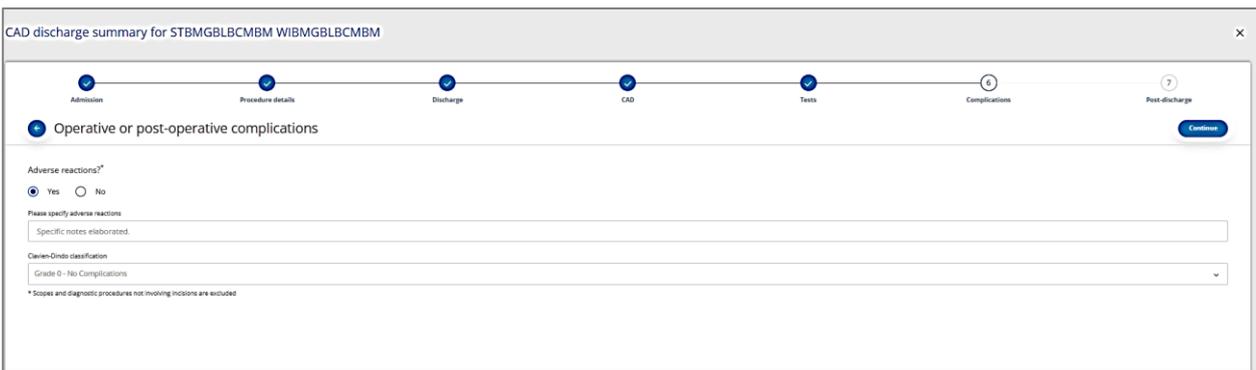


Only 1 PDF File is allowed per test. If a second file is selected the previous file will be replaced.

Once the provider has completed the test results page and have selected the continue tab. The complication page will be displayed next.

Complications Page

The adverse reaction indicator is mandatory, if the Yes option is selected, the Clavien-Dindo classification drop down box will be available for selection. If Grade 0 – No complications is selected, no further checkboxes will be displayed.



For other options, a list of complications will display, and the provider will have an option to capture multiple options before they are able to proceed to the next step.

