

CARDIAC ARREST AND THORACIC AORTIC DISSECTION PATHWAY

**A toolkit to support
Trusts in the South East
set up their own Cardiac
Arrest and Thoracic
Aortic Dissection
pathways**

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TABLE OF CONTENTS

Introduction to the Cardiac Arrest and Thoracic Aortic Dissection Pathway

What do we have to support you in the pathway?

ICU and CCU support

DNA storage

Patients and their families

Further support

Appendix



What is the Cardiac Arrest and Thoracic Aortic Dissection Pathway?

The out of hospital cardiac arrest (OOHCA) and Thoracic Aortic Dissection (TAD) Pathway builds on the established Sudden Cardiac Death (SCD) programme developed by the British Heart Foundation, NHS England and specialist ICC services. Regional ICC Coordinators support local implementation and access to specialist inherited cardiac conditions care.

The OOHCA and TAD pathway ensures patients with a suspected inherited cause of cardiac arrest or TAD are identified, have DNA stored where appropriate, and are referred into the Inherited Cardiac Conditions (ICC) network. This supports earlier diagnosis, appropriate treatment, and identification of at-risk family members.

Local trusts play a critical role in ensuring eligible patients enter the pathway. Their key responsibilities are to:

- Identify eligible patients.
- Arrange DNA storage as early as possible.
- Inform and signpost patients and families.
- Refer surviving patients to their local ICC service.
- Notify the appropriate ICC team/coordinator when patients do not survive.

ICC team responsibilities include:

- Genomic testing and counselling (where appropriate).
- Ongoing patient management and follow-up.
- Family screening and cascade testing where indicated.

What do we have to support you in the pathway?

We have a host of documents, pathways, and training materials to assist you in establishing the pathway, upskilling teams, and providing information and support to patients and their families. Click on the links below to open the relevant documents.

- 1 [SCA and TAAD training presentation for ICU nurses and others in the pathway](#)
- 2 [Checklist for ICU and CCU teams](#)
- 3 [Standard Operating Procedure for DNA storage](#)
- 4 [Pathway flowchart for DNA storage](#)
- 5 [Brompton Genetics Form](#)
- 6 [Relative's Letter](#)
- 7 [FAQs on blood storage for relatives](#)
- 8 [Patient and Family information pack](#)



Scan the QR to head to our website for further information and resources

ICU and CCU support

When a patient presents to hospital having had an out of hospital cardiac arrest or thoracic aortic dissection, they will most likely be placed in the care of ICU or CCU. It is therefore important for teams within these clinical areas to understand this pathway and its importance.

Key information to share with CCU and ICU teams is how and when to take blood samples to store DNA, and contact details for the local ICC/cardiology team.



- ❖ Discuss DNA storage with NOK and provide local relatives letter when appropriate*
- ❖ Ask the inpatient ICC or Cardiology team (depending on local service availability) to review patient and guide investigations.
- ❖ If patient survives (and genetic cause likely or cardiac arrest unexplained) -> responsible inpatient team refers to local ICC clinic for further investigations and to consider genomic testing.
- ❖ If patient doesn't survive (and genetic cause likely or cardiac arrest unexplained) -> medical examiner alerts ICC coordinator.

Case Study:

Our ICC coordinator based at St Georges worked with the ICU team at Frimley Park to establish this pathway.

Through training and education sessions with ICU nurses a referral pathway has been established with nurses trained to understand the importance of taking, storing, and sending blood samples to the RBH lab for potential future genetic testing.

Our regional ICC coordinators are on hand to offer education sessions and help establish the pathway with ICU teams.

A standard operating procedure for DNA storage following OOHCA or TAAD has been developed to support you. This provides a template for each step of taking blood, storing DNA and options for future genetic testing.

In some cases, patients do not survive long enough for a full diagnostic assessment. The pathway therefore ensures that DNA is stored at the earliest opportunity and that patients and their families are connected to specialist ICC services for further assessment and follow-up.

The key points to remember are:

- Take blood samples early in the patients admission and send to the GLH.
- Alert the local ICC or cardiology team, depending on availability, for in-patient review.
- Responsible inpatient team to refer to local ICC centre when patient survives to discharge.

We are grateful to the BHF for funding the wider programme of work to support detection of ICC in high-risk families.



- ❖ Take 2x EDTA blood samples.
- ❖ Attach patient label/details to EDTA tubes.
- ❖ Attach patient label/details to DNA storage form*.
- ❖ Send blood samples and form to genomic laboratory hub (GLH):
 - ❖ Directly
 - Or
 - ❖ Via hospital pathology
- ❖ Record on local electronic health record that DNA storage was performed.
- ❖ Consent not required.

6

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8

Patients and their families

A core part of the pathway is presenting this information to patients. We have developed, in collaboration with members of our Patient and Public Voice Forum, accessible and informative packs. These help guide patients and their families through this process, introducing the concept of genomics and genetic testing, and presenting the next steps. These are:

Relative's Letter

A letter to be sent to the patient's family explaining that blood has been taken and stored, signposting to their local ICC centre

DNA storage FAQs

FAQs to provide further information on the taking and storing of blood for potential genetic testing

Patient info pack

A booklet introducing the concepts of inherited cardiac conditions and genetic testing

We are here to provide further support

We have two dedicated ICC Coordinators in the region to support the pathway implementation and training for staff in your ICU and CCU teams.

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