

# Sudden Cardiac Arrest Pilot Pathway

**DNA Storage and ICC/Genetics  
referral**

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# The What, The Why, The How

Why are we  
doing the  
project?

What is the  
project?

How are we  
implementing it?

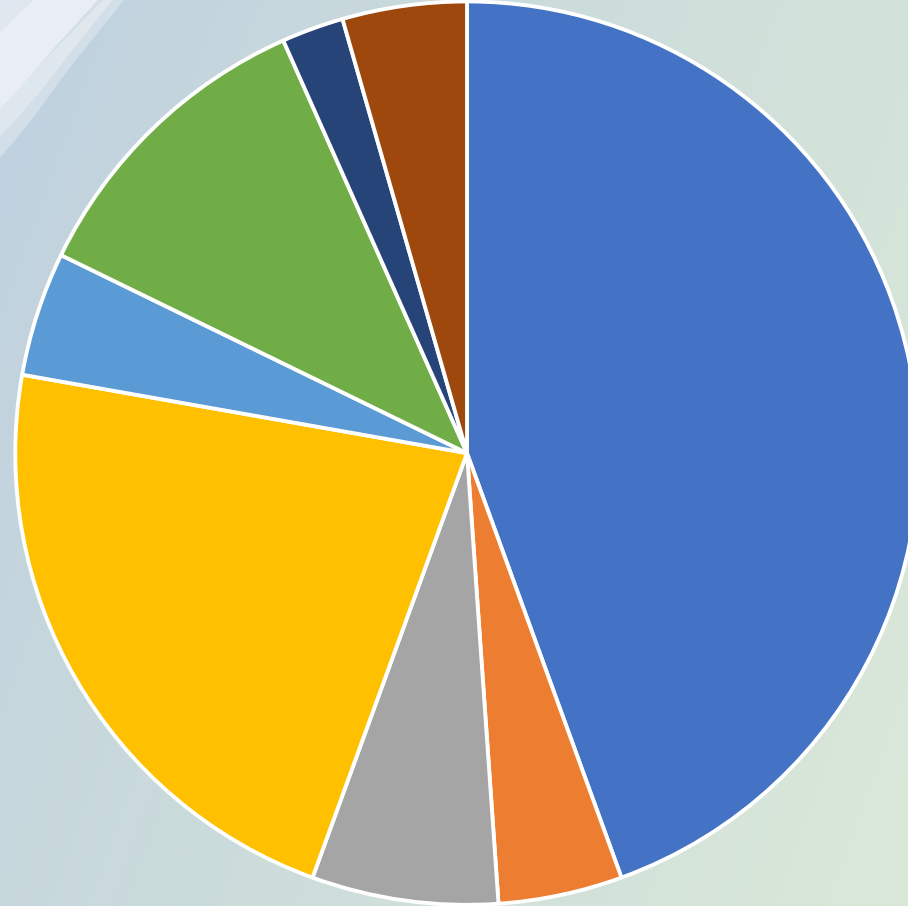


# Elizabeth's Story



# Causes of Out of Hospital VF/VT Arrest under 60 years of age

Cases from St George's Hospital  
Jan'22 – Sept '22



- Myocardial Infarction
- Undetermined/IVF
- Alcoholic cardiomyopathy
- Ischaemic Cardiomyopathy
- Hypertrophic Cardiomyopathy
- ARVC
- Likely LQT
- Non ischaemic cardiomyopathy
- 



- 46 VT/VF OOHCA under aged 60 or below in the last 10 months
- Of the 22 non ischaemic causes eligible for genetic testing, 10 died and 12 survived
- None of the 10 cases had DNA stored or were referred to ICC and no family members have been referred to SGUH
- Of the 12 survivors, 3 had inpatient genetic testing and a further 4 were referred to ICC as an outpatient (2 have subsequently been seen and genetic testing sent)
- None of the CAD patients had been referred to our FH clinic



**Genes in which we've  
found pathogenic or likely  
pathogenic variants in  
SCA/SCD cases at St  
Georges over the last 4  
years**

RYR2

KCNQ1

MYH7

SCN5A

MYBPC3

PKP2

KCNH2

TTN

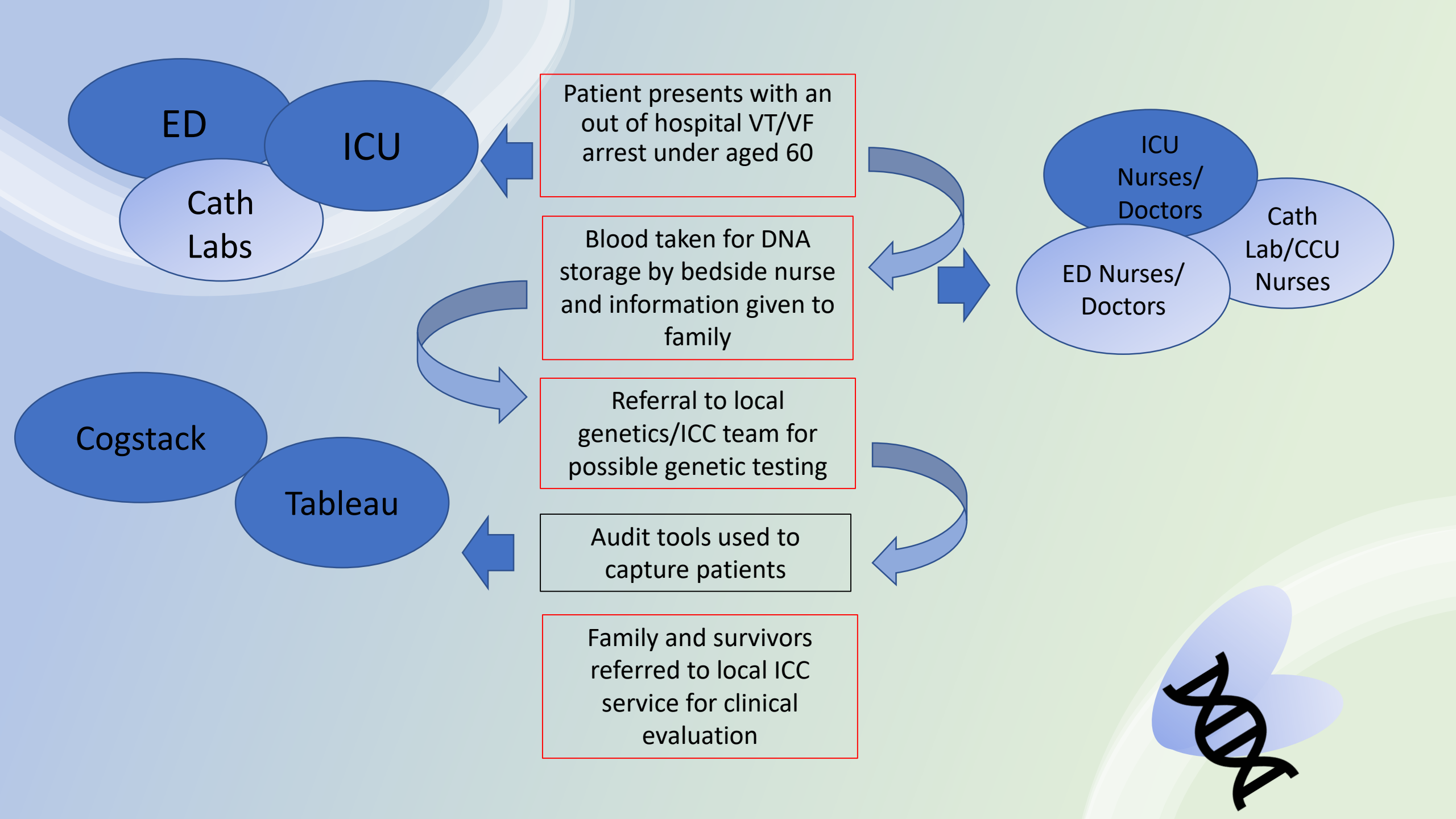


# Aims of the Project

- Consistent sample retention
- Consistent onward referral for patient and families
- Better communication with families
- Improved diagnosis accuracy
- Improved patient and family experience
- Possible inclusion of the ICC Coordinator role embedded within ICC services







ED

ICU

Cath  
Labs

Patient presents with an  
out of hospital VT/VF  
arrest under aged 60

Blood taken for DNA  
storage by bedside nurse  
and information given to  
family

Referral to local  
genetics/ICC team for  
possible genetic testing

Audit tools used to  
capture patients

Family and survivors  
referred to local ICC  
service for clinical  
evaluation

ICU  
Nurses/  
Doctors

Cath  
Lab/CCU  
Nurses

ED Nurses/  
Doctors

Cogstack

Tableau





# Where?

- St Georges University Hospital
- Frimley Park Hospital
- Guys and St Thomas' NHS Foundation Trust
  - St Thomas' Hospital
  - Kings College Hospital
  - Royal Brompton Hospital

If successful, for further roll out to other trusts



# How?

- Collaboration with ICU leads and matrons
- Education of ICU/ED nurses
- Collaboration with GLH/labs
- Close working with Cardiology teams
- Working closely with ICC teams and cardiac genetic counsellors/consultants
- Simple pathway adapted to different trusts
- Audit and data capture
- Evaluation
- Roll out



# Education and Awareness

- Audio powerpoints for circulation
- Presenting on ICU study days cross site
- Bedside teaching
- Collaboration with Intensive Care group
- Collaboration with Cardiology
- Posters
- Ongoing engagement

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**If you would like to find out more or be involved in the roll out of the project please do get in contact**



# Challenges

- Logistics of referrals and DNA storage
- New IT systems
- Staffing pressures
- ICC/Genetics capacity
- Inappropriate storage
- Giving results/cascade screening



# Questions?

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