



SHOWCASING SYNCOPES PIONEERS OF 2023

STARS HEALTHCARE PIONEERS REPORT

In memory of Dr Adam Fitzpatrick



MISSION

STARS (Syncope Trust And Reflex anoxic Seizures) offers information, education, awareness, and support to anyone affected by unexplained loss of consciousness, fainting, transient loss of consciousness, Reflex Anoxic Seizures (RAS), Postural Orthostatic Tachycardia Syndrome (PoTS), and all forms of syncope. STARS aims to ensure that anyone presenting with unexplained loss of consciousness receives the correct diagnosis, the appropriate treatment, informed support, and signposting to the appropriate medical professional. We hope that with greater public and professional awareness we can aid early and correct diagnosis of the condition and enable people to lead a more normal life.

FOREWARD

STARS Healthcare Pioneers Report – Showcasing Syncope Pioneers in memory of Dr Adam Fitzpatrick; this annual report is published in his honour to coincide with Arrhythmia Alliance (A-A) World Heart Rhythm Week as Adam was one of the instigators of launching an awareness week in 2004, and who personally contributed so much to the diagnosis and management of Syncope.

Adam strived for perfection and always put the patient first. His dedication to the STARS community and to improving patient outcomes was always paramount in everything he did. Thus, the STARS Syncope Healthcare Pioneers Report is thought to be a proper tribute to Adam's great achievements, once again to the benefit of patients.

This year, we have again received abstracts from around the world, with the highest scoring submissions from Canada, Ireland, the Netherlands, and the UK. The standard was very high which reflects so well on both Adam's memory and on STARS. I have no doubt that Adam would be proud to be honoured by these communications. It also highlights the lack of outlets for excellent work on syncope; this is sad for the nascent specialty but a great plus for STARS, an organisation which is dedicated to the care of

syncope patients around the world and to the advancement of science within this field.

Careful appreciation of these reports which will, we must hope, appear in full scientific papers later, offers real help for our patients.

STARS celebrates its 30th anniversary this year, 2023. It has helped hundreds of thousands of people around the globe – often those who have lived with unexplained loss of consciousness without any medical explanation or advice. Contact with STARS has enabled them to engage with a correct healthcare professional and to receive appropriate advice and treatment. There is still much to achieve and we need to ensure medical students are trained appropriately to recognize the importance of investigating the underlying cause of syncope and for an appropriate referral. We must remember syncope is a symptom, and sometimes it may be the only symptom prior to sudden cardiac death due to an underlying fatal arrhythmia. We should never forget ...

TAKE FAINTING TO HEART – there is no such thing as a simple faint.

Congratulations to the 2023 Syncope Healthcare Pioneers and we thank you for the services you are providing to improve outcomes for those living with syncope.



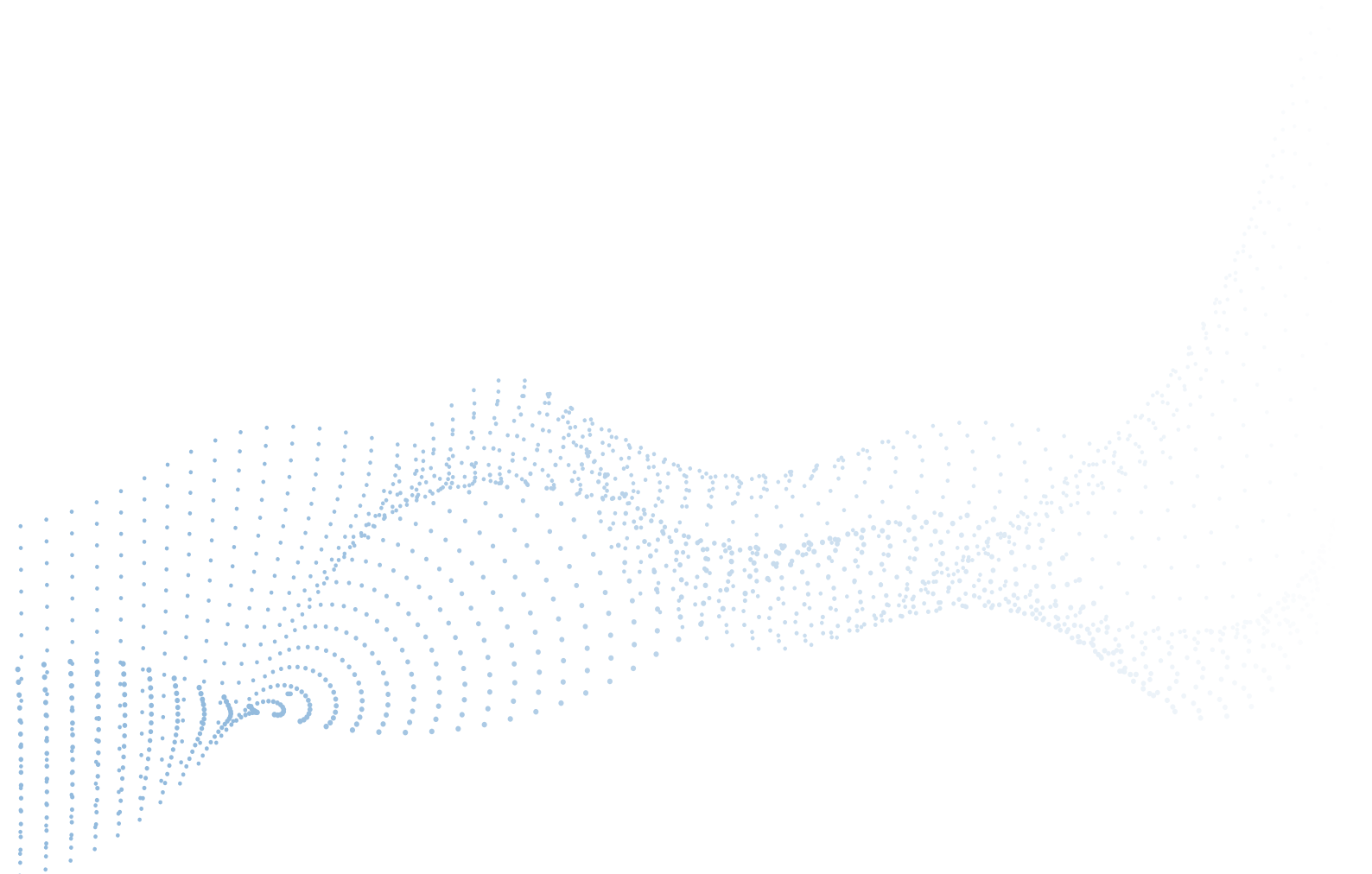
A handwritten signature in black ink that reads "Trudie Lobban".

Trudie Lobban MBE
Founder and CEO,
STARS



A handwritten signature in black ink that reads "R Sutton".

Prof. Richard Sutton
STARS Medical Advisory
Committee Member



- 6** | IMPLEMENTATION OF THE ESC SYNCOPE GUIDELINES IN THE EMERGENCY WARD WITH QUICK REFERRAL ROUTES TO A SYNCOPE UNIT IMPROVES DIAGNOSTIC PERFORMANCE AND LOWERS SOCIETAL COSTS
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IMPLEMENTATION OF THE ESC SYNCOPE GUIDELINES IN THE EMERGENCY WARD WITH QUICK REFERRAL ROUTES TO A SYNCOPE UNIT IMPROVES DIAGNOSTIC PERFORMANCE AND LOWERS SOCIETAL COSTS

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ABOUT THE REPORT

We conducted an intervention study in five Dutch Emergency Departments and demonstrated that implementation of the ESC 2018 Syncope Guidelines with quick referral routes to a multidisciplinary Syncope Unit was associated with a higher diagnostic yield and accuracy at lower Syncope-related societal costs.

INTRODUCTION

Syncope management in the Emergency Department (ED) is fraught with unnecessary tests and frequent failure to establish a diagnosis. We therefore determined the potential of implementing the 2018 European Society of Cardiology (ESC) Syncope Guidelines with quick referral routes to a Syncope Unit regarding diagnostic yield, accuracy and costs. In addition, we conducted a qualitative study to identify factors that hinder ('barriers') and facilitate ('facilitators') the implementation process.

METHODS

Multicentre trial in five Dutch hospitals comparing two groups of Syncope patients visiting the ED: one before intervention (Usual Care) and one afterwards. The intervention consisted of the simultaneous implementation of the ESC Syncope Guidelines with quick referral routes to a Syncope Unit when indicated. We compared diagnostic yield, accuracy and Syncope-related healthcare and societal costs using (logistic) regression analysis, accounting for study site. One-year follow-up data were used to define a gold standard reference diagnosis by applying ESC criteria or, if not possible, evaluation by an expert committee. We determined accuracy by comparing the treating physician's diagnosis with the reference diagnosis. Additionally, we conducted and transcribed semi-structured interviews with 19 specialists and residents to evaluate the implementation process.

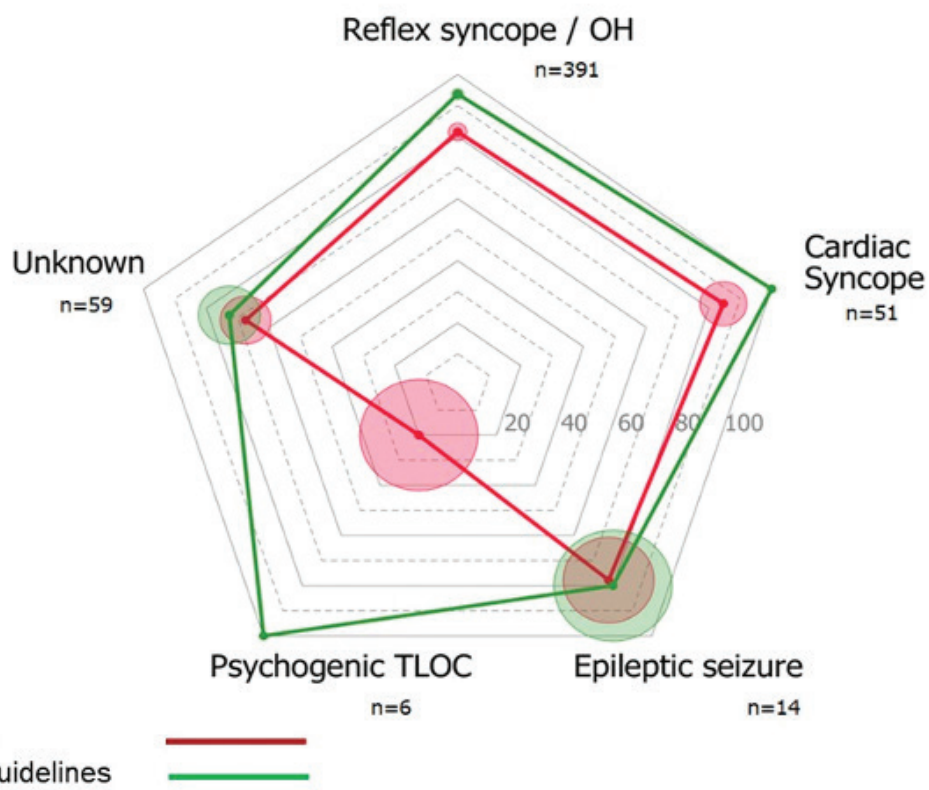
We included 521 patients (Usual Care n=275; Syncope Guidelines intervention n=246). The Syncope Guidelines intervention resulted in a higher diagnostic yield (89% vs. 76%, 95% CI: 6 to 19%) and a higher diagnostic accuracy (Risk Ratio 1.15; 95% CI 1.07 to 1.23) compared to Usual Care. Syncope-related healthcare costs did not differ between groups, yet the Syncope Guideline implementation resulted in lower total Syncope-related societal costs compared to Usual Care (saving \hat{a} , -908 per patient; 95% CI \hat{a} , -34 to \hat{a} , -1782). We identified 31 barriers and 22 facilitators. Most barriers occurred on the level of the individual health care professional (eg, inexperienced residents having to work with the guideline) and the organizational context (eg, specialists not relinquishing preceding procedures). Participants reported most facilitators at the level of innovation (eg, structured work-flow) and welcomed the multidisciplinary Syncope Unit as useful solution to a perceived need in clinical practice.

CONCLUSION

ESC Syncope Guidelines implementation in the ED with quick referral routes to a Syncope Unit improved diagnostic yield and accuracy, and lower societal costs.

Our intervention facilitated a structured multidisciplinary work-up for Syncope patients. Most identified barriers related to the individual health care professional and the organizational context. Future implementation strategies for Syncope care should be tailored to address these barriers.

Increase in diagnostic accuracy following the implementation of the ESC Syncope Guidelines



THE IMPACT OF A SPECIALIST SERVICE IN THE EMERGENCY DEPARTMENT ON PATIENTS PRESENTING WITH SYNCOPE, FALLS OR DIZZINESS

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ABOUT THE REPORT

This project aimed to examine the impact of ED-FASS (Emergency Department Falls and Syncope Service) a dedicated specialist service embedded within an ED, seeing patients of all ages with Syncope, falls and dizziness.

INTRODUCTION

Assessment and management of Syncope, falls and dizziness comprises of a significant proportion of Emergency Department (ED) and acute hospital activity. Up to half of patients presenting to the ED with Syncope, falls or dizziness are admitted to hospital. ED-FASU was established in March 2019 with the aim of expediting diagnosis and providing earlier specialist management, to reduce unnecessary admissions by directing patients to more appropriate ambulatory pathways, to reduce length of stay of patients who need admission and to direct appropriate investigation by delivering specialist assessment of Syncope and related disorders at the front door of this acute hospital.

METHODS

The ED-FASU team comprised a consultant geriatrician, specialist registrar in geriatric medicine and clinical nurse specialist. Inclusion criteria were those of all ages, presenting with Syncope/presyncope/falls/dizziness between 0800-1800 Monday-Friday. Patients were reviewed directly from triage or after referral from the ED team. A pre and post cohort study examining the impact of this novel ED-based specialist multidisciplinary service on admission rates, length of stay and re-admission at three months on all patients presenting to the ED with Syncope, falls or dizziness from April to July 2018 (pre-ED-FASS) inclusive and compared to April to July 2019 inclusive (post-ED-FASS) was undertaken.

RESULTS

There was a significantly lower admission rate for patients presenting in 2019 compared to 2018 [27% (453/1676) vs. 34% (548/1620); $\chi^2 = 18.0$; $P < 0.001$], with a 20% reduction in admissions. The mean LOS for patients admitted in 2018 was 20.7 [95% confidence interval (CI) 17.4-24.0] days compared to 18.2 (95% CI 14.6-21.9) days in 2019 ($t = 0.98$; $P = 0.3294$). This accounts for 11 344 bed days in the 2018 study period, and 8299 bed days used after ED-FASS. There was also a significant reduction in readmission rates within 3 months of index presentation, from 21% (109/1620) to 16% (68/1676) ($\chi^2 = 4.68$; $P = 0.030$).

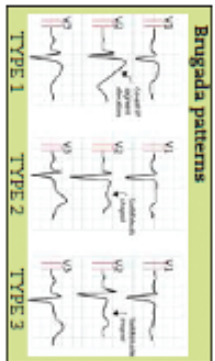
CONCLUSION

In conclusion, after introduction of ED FASU, admissions for Syncope, falls and dizziness dropped by 20% (13% in patients aged 65 years or more). Acute hospital bed day use attributable to Syncope, falls and dizziness dropped by 25% and patients discharged after presenting with Syncope, falls or dizziness were 30% less likely to be readmitted within the next three months. This study highlights the significant benefits of a dedicated Syncope service in the ED. As a result of the success of this pilot the service has been permanently funded.

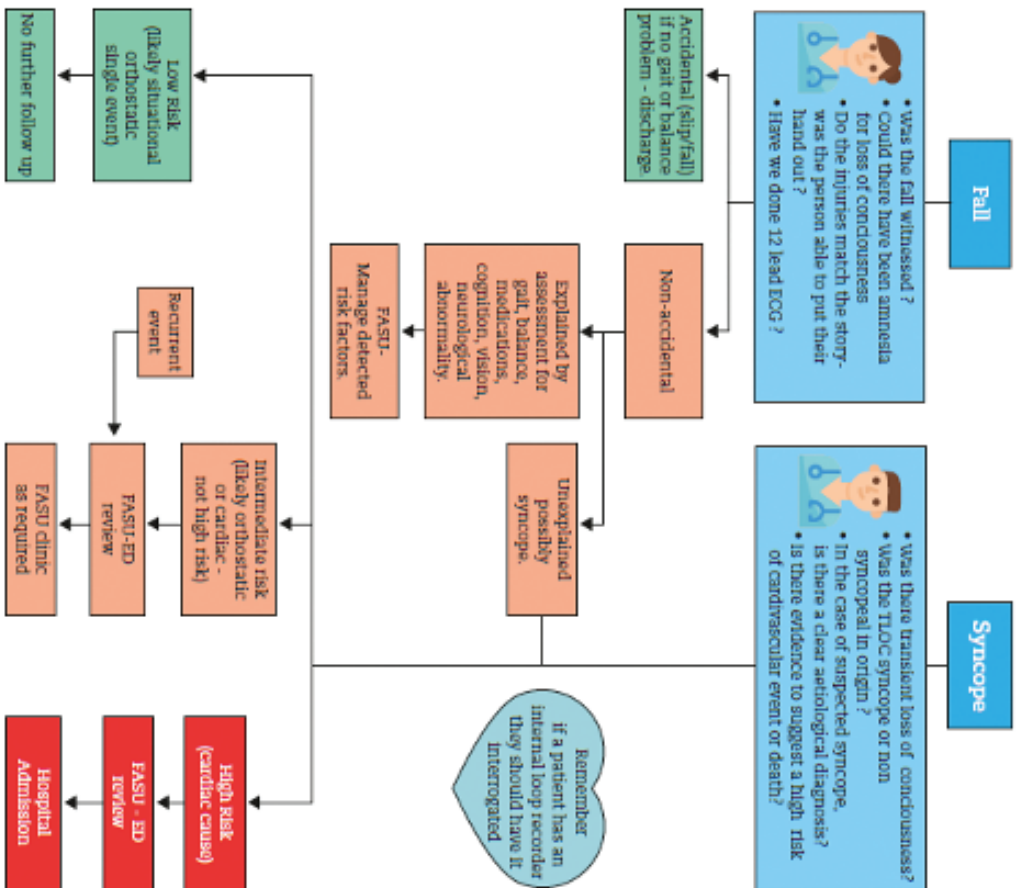
ST. JAMES'S HOSPITAL ED Pathway for Falls and Syncope

The FASU team will review all patients presenting with Falls or Syncope to the ED between the hours of 08.00-17.00 Monday – Friday. Out of hours, patients stratified as low or intermediate risk can be referred via EPR to the ED-FASU team where they will be triaged and reviewed as appropriate.

Definitions:
A fall is defined as an event whereby an individual lands on the ground or another lower level with or without loss of consciousness.
Syncope is a transient loss of consciousness due to cerebral hypoperfusion (reduced blood flow through the brain).



- 4 questions that need to be answered in ED**
1. Was the event transient loss of consciousness?
 2. In the case of transient loss of consciousness, is it syncopal or non syncopal in origin?
 3. In the case of suspected syncope, is there a clear aetiological diagnosis?
 4. Is there evidence to suggest a high risk of cardiovascular event or death?



High risk check list - ECG	
Major	
	ECC changes consistent with acute ischaemia
	Mobitz II second & third degree AV block
	slow AF (<40 B.P.M)
	Persistent sinus bradycardia (<40 B.P.M) or repetitive sinoatrial block or sinus pauses > 3 seconds in awake state and in absence of physical training
	Bundle branch block, intraventricular conduction disturbance, ventricular hypertrophy or Q waves consistent with ischaemic heart disease or cardiomyopathy.
	Sustained and non-sustained VT
	Destruction of an implantable cardiac device (ICM or ICD)
	Type 1 Brugada pattern
	ST-segment elevation with type 1 morphology in leads V1-V3 (Brugada pattern)
	QTc > 460ms in repeated 12 lead ECG's indicating LQTS.
Minor (only high risk if history consistent with arrhythmic syncope)	
	Mobitz I second degree AV block and first degree AB block with markedly prolonged PR interval
	Asymptomatic inappropriate mild sinus bradycardia (40-50 bpm), or slow AF (40-50 bpm)
	Paroxysmal SVT or atrial fibrillation
	Pre-excited QRS complex
	Atypical Brugada patterns (c-shadows)
	Negative T waves in right precordial leads, epsilon waves suggestive of ARVC
High risk check list - Syncope event	
	New onset of chest discomfort, breathlessness, abdominal pain, or headache
	Syncope during exercise or when supine
	Sudden onset palpitation immediately followed by syncope
	High risk if associated with structural heart diseases or abnormal ECG
	• No warning symptoms or short (10s) prodrome
	• Family history of SCD at young age
	• Syncope in sitting position
High risk check list - Past Medical History	
	Severe structural or coronary artery disease (heart failure, low LVEF or previous myocardial infarction)
High risk check list - Physical Examination	
	Unexplained systolic BP in the ED, 90mmHg examination
	Suggestion of gastrointestinal bleed on rectal examination
	Persistent bradycardia (40 bpm) in awake state and in the absence of physical training
	Undiagnosed systolic murmur

MEDICAL DETECTION DOGS - A COST-EFFECTIVE ADJUNCT IN ONGOING PoTS MANAGEMENT

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ABOUT THE REPORT

The use of Medical Alert Assistance Dogs in reducing Syncope-related injury frequency, reducing healthcare costs, and improving quality of life.

INTRODUCTION

Postural tachycardia syndrome (PoTS) is characterised by an abnormal autonomic nervous system response to an upright posture often resulting in episodes of altered cerebral blood flow, tachycardia and Syncope. Medical Detection Dogs is a UK based charity that trains medical alert assistance dogs (MAAD) to alert to an impending episode of Syncope, allowing the person to take action to reduce the risk of injury. Our typical clients also have additional co-morbidities such as Mast Cell Activation Syndrome, significant bladder and gastrointestinal disturbances, rendering them unable to work, or undertake activities of daily living without third-person help. Often resulting in an isolated life due to the fear of experiencing an episode in public.

METHODS

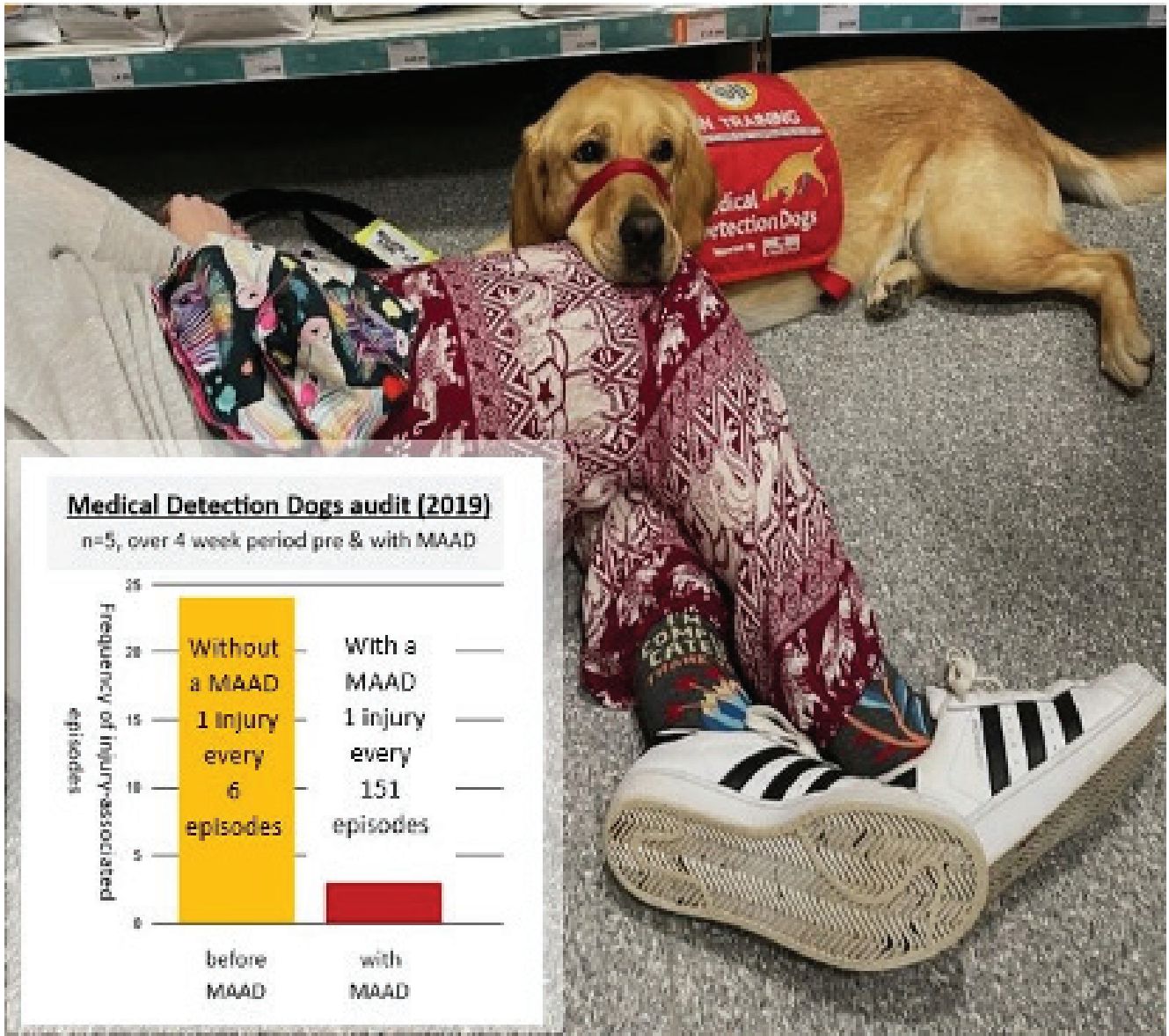
A MAAD is matched and trained by Medical Detection Dogs to meet an individual's needs, and to pre-alert them when an episode is about to occur. The assistance dog uses its sense of smell to detect a change in their client's odour and to reliably alert them when this change occurs. The pre-alerting allows the client to find a safe place to lie down, preventing injury from occurring. They can also be trained to fetch a water bottle, medication bag or summon help during the episode, if necessary. The dog will lie next to the client during an episode and provides a sense of security for the client until they are able to recover.

RESULTS

An objective health economics report carried out by MTech Access (2023) has shown that the pairing of a MAAD with a client can save the NHS £33,213 due to a reduction in the occurrence of injuries, ambulance call outs and hospital admissions. In addition, there is an increase of 0.92 QALYs per person which equates to a positive net monetary benefit of £51,984. This would result in a cost-effective intervention to the NHS for the lifetime of the MAAD placement. An audit of five clients with a MAAD showed a reduction in injury-associated episodes of 87% compared to having no MAAD in-situ.

CONCLUSION

The use of Medical Alert Assistance Dogs can significantly reduce the risk of Syncope-associated injury and related healthcare costs. Our clients report greater confidence in going out, performing activities of daily living and in some cases are able to return to work following the placement of an assistance dog with them. For many people, this intervention could also be an additional tool in increasing independence and reducing fear.



THE VALUE OF A MULTIDISCIPLINARY TEAM (MDT) IN MANAGING PATIENTS WITH COMPLEX OR UNEXPLAINED SYNCOPE

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ABOUT THE REPORT

A project looking into the benefit of a multidisciplinary approach to Syncope management

INTRODUCTION

Syncope is a common clinical problem with a lifetime prevalence of 20%. It is defined as a transient loss of consciousness due to temporary global hypoperfusion characterised by a rapid onset, brief duration and a spontaneous recovery. Syncope shares clinical features with other disorders including seizures, metabolic disturbances and sleep disorders which can make the diagnosis challenging for clinicians. Although MDTs are recognised key components in contemporary patient care in areas such as heart failure and cancer management, there is no guidance on MDT working in Syncope management. Limited data available suggests that multidisciplinary team input in diagnosis of Syncope results in higher diagnostic rates, lower numbers of hospital admissions and reduced overall medical costs. To improve the diagnostic efficiency of Syncope of uncertain aetiology and provide unified management a Syncope MDT was introduced at the Queen Elizabeth University Hospital (QEUH) in November 2017. This MDT consists of cardiologists, geriatricians, a neurologist and cardiac physiologists and occurs on a monthly basis. The aim of this review was to understand the potential impact of the Syncope MDT on diagnostic yield and time to further investigation and management.

METHODS

A retrospective case note analysis was performed for patients reviewed at the Syncope MDT between November 2017 and December 2021.

RESULTS

The total number of patients discussed at the MDT was 103 with an average age of 64 years (range 18-92). The main reasons for referral to the service were cardiology specialist advice (65%), neurology specialist advice (19.4%) and complex case reviews (13.6%). Other reasons included discussion of driving guidance and a retrospective case review. Image 1 shows perceived diagnosis pre and post-MDT discussion. After discussion at the MDT the percentage of patients with an unexplained syncopal episode reduced from 26.2% to 14.6%. The observed benefits of the MDT included agreement on current management plan (29.8%), streamlined referral for pacemaker or implantable loop recorder (ILR) insertion (23.1%), appropriate additional investigations (for example echocardiogram, tilt test or cardiac monitoring) expedited (15.4%), medication alteration including early introduction of anti-epileptics (17.3%) and follow-up arranged with appropriate speciality team (14.4%).

CONCLUSION

Introduction of a syncope MDT reduces unexplained Syncope rates in complex patients, streamlines investigations, reduces the need for multi-speciality outpatient reviews and allows earlier introduction of anti-epileptic medication for those with a new seizure disorder. These benefits improve the patient experience by reducing time to diagnosis and treatment.

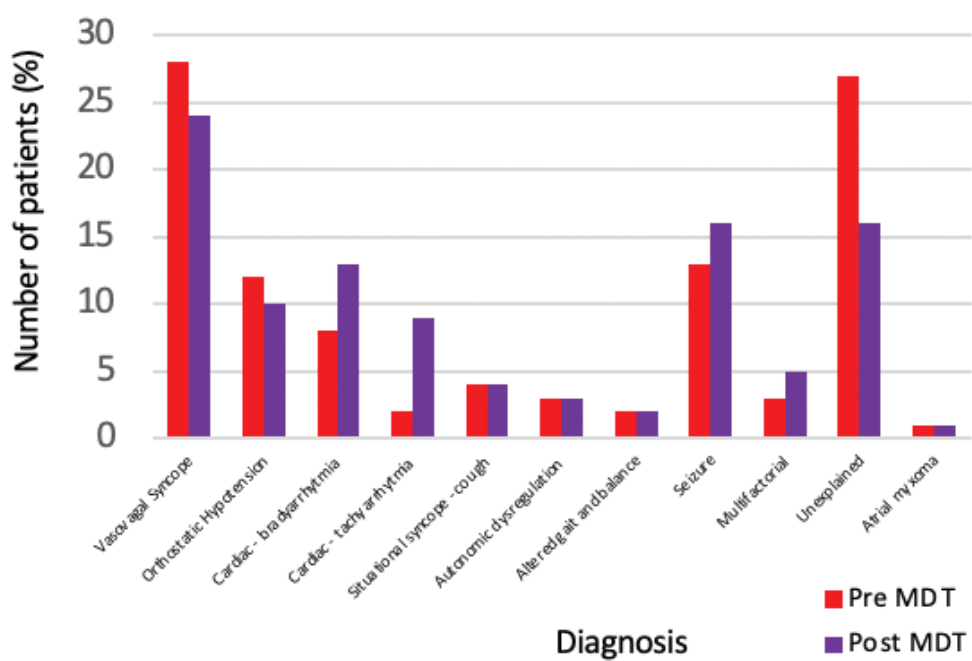


Image 1: Graph depicting diagnosis pre-MDT vs post-MDT.

Image 1. Graph depicting diagnosis pre-MDT vs post-MDT.

IMPLEMENTATION AND DEVELOPMENT OF NON-MEDICAL-LED INTRA-CARDIAC MONITORING IMPLANTATION SERVICE

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ABOUT THE REPORT

This service was set up to address the diagnostic management for patients attending with Syncope and having extending waiting list due to the Covid-19 pandemic.

CONTENT

The management of Syncope can be challenging and sometimes complex. This complexity can be more noticeable in that people are living longer in an ageing population where the disease progression requires longer-term management. Traditionally, patients were managed using a medically led model for implantation of intracardiac monitoring but with a changing workforce, some roles are now transferred to non-medical practitioners of which intracardiac monitoring is one example. The Non-Medical-Led Intra-Cardiac Monitoring (ICM) Service was developed in response to long waiting times following the Covid-19 pandemic. Advanced Clinical Practitioners (ACPs) who are non-medically trained were assessed by medical clinicians using a competency document and practical demonstration. ACPs exercise autonomy with complex decision-making, uncertainty, and varying risks and are accountable for decisions (HEE 2017).

METHOD

This was a retrospective analysis between January 2021 and October 2022. 269 successful procedures were performed by three ACPs.

Data were collated and analysed for:

- Complications and causes
- Patients' experiences, assessed with a questionnaire or verbal feedback
- The ACP's contribution to reducing the waiting times

RESULTS

Analysis of results showed that at the acute stage within 24 hrs), 2 (>1%) patients were treated for bleeding requiring suturing by a medically trained clinician; at six months (chronic) 3 patients (1.1%) had their implant removed due to pain or discomfort: at the longer-term stage (>12 months), there were no procedural related outcomes. The waiting list was reduced to 4-6 weeks after 11 months and 2 weeks after 21 months. The patient satisfaction score was approximately 96%.

CONCLUSION

Findings showed ACPs performed safe and excellent service in the role of ICM implantation. Procedural complication risks were not increased and waiting times were reduced. Positive patient experience was enhanced due to the accessibility of the ACP along with the Cardiac Physiology team who were available for any post-implant issues or concerns.



	Male (n=160) Mean Age 54.64	Female (108) Mean age 55.08
COMPLICATIONS		
Erosion	0.00%	0.00%
Bleeding	0.37%	0.37%
Infection	0.00%	0.00%
Haematoma	0.00%	0.00%
Pain and Discomfort	0.74% (2)	0.37% (1)
Unpredictable complications	0.00%	0.00%
PROCEDURAL INFORMATION		
Indication for Implantation		
Syncope	total: 125 (269)	
Palpitations	46 (269)	
Suspected AF	48 (269)	
Suspected Cryptogenic stroke	18 (269)	
Other (ie. congenital heart conditions, etc)	32(269)	
COMPLICATIONS ONSET		
Acute >48hrs	0.37% (1)	0.37% (1)
Chronic < 6 months	0.74% (2)	0.37% (1)
Long term< 12 months	0.00%	0.00%
WAITING LIST		
6 months	9 months	9 months
12 months	6 months	6months
>18 months	2 weeks	2 weeks

CANADIAN CARDIAC CARE LIVE CONTINUOUS REMOTE (OUT-OF-HOSPITAL) CARDIAC MONITORING IN SYNCOPES

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ABOUT THE REPORT

Utilization of Live continuous Remote cardiac monitoring in Syncope Management

INTRODUCTION

Syncope is a common Emergency Department (ED) presentation.¹ While often benign, some patients have serious and life-threatening underlying causes that may not be apparent during the initial ED assessment.² Therefore, we need an efficient system of management of such patients, especially those with life-threatening serious arrhythmias.

Our patient is an 81-year-old hypertensive woman who presented to our local ED with recurrent episodes of lightheadedness and Syncope. Her medications included Candesartan 16 mg OD, Bisoprolol 2.5 mg OD, and ASA 81 mg OD. The ED

assessment revealed no significant cause of her Syncope, and she was subsequently discharged home with a remote continuous cardiac monitor (cardio-phone, Braemer, Eagen, MN, USA). During the cardiac monitoring, she developed a presyncope coinciding with an ECG documentation of sinus pauses of up to 5.5 seconds (Fig. 1). Our certified cardiovascular technician immediately contacted the patient and connected her to the cardiologist on call. The cardiologist then called the local EMS to transport the patient to the ED, and communicated with the ED physician. The ECG was sent to the receiving ED before the patient's arrival. The pauses continued despite the discontinuation of Bisoprolol. The patient was fitted with a pacemaker and was discharged home with no recurrent Syncope.

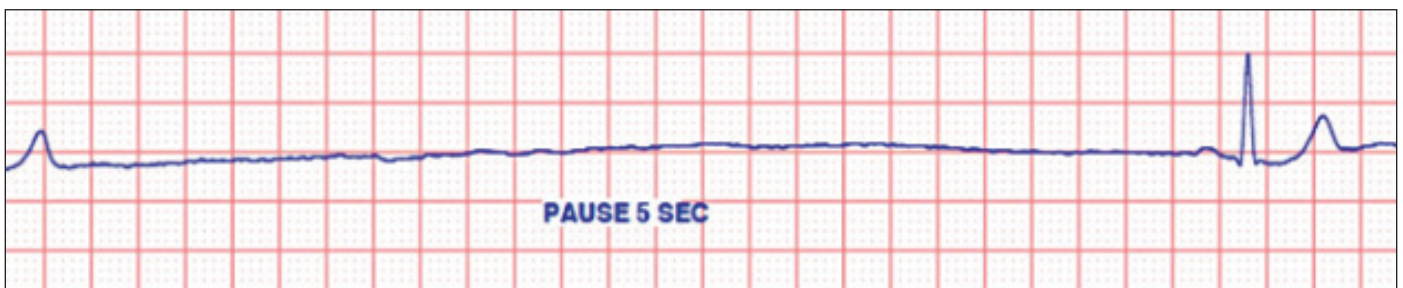


Fig 1. Symptomatic 5 second sinus pause

Our program (Fig. 2), is Canada's only 24/7 live cardiac monitoring centre providing remote cardiac rhythm monitoring of emergency department patients presenting with Syncope, and who are able to be discharged home.³ This includes live monitoring and analysis of the abnormal ECG by around-the-clock certified technicians through a cellular network, supported by 24/7 cardiologist on-call coverage for immediate management of serious arrhythmias.

The management of Syncope patients is very challenging and costly.¹ Our program provides an accurate symptom rhythm correlation and immediate diagnosis and management of serious arrhythmias. We believe the use of live remote cardiac monitoring will reduce healthcare costs and most importantly, improve patient safety.

References

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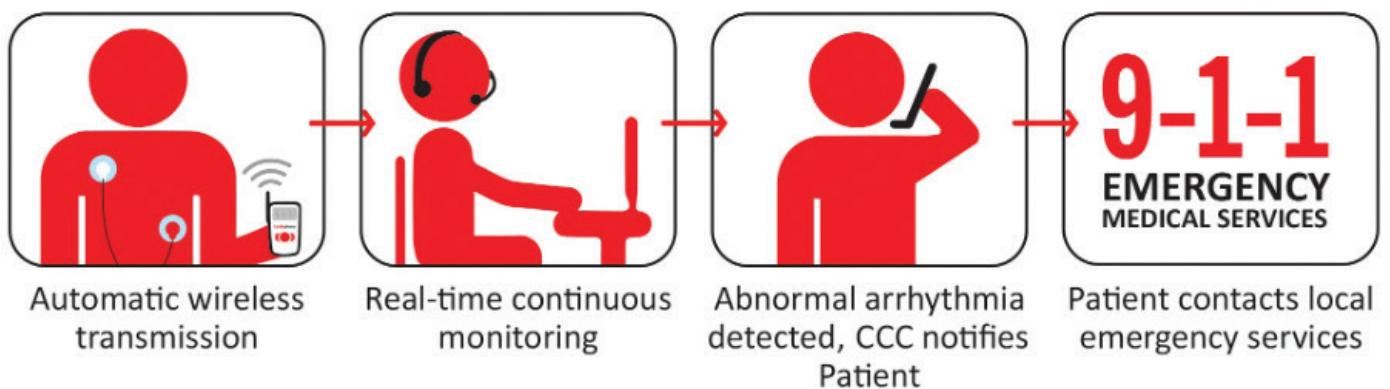


Fig 2. Emergency arrhythmia detection protocol at Canadian Cardiac Care

MULTI-DISCIPLINARY SPECIALIST VENTRICULAR TACHYCARDIA CLINIC

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ABOUT THE REPORT/PROJECT

Barts Cardiac Device Clinic introduced a multi-disciplinary VT clinic, collaborating with specialists to prevent life-threatening heart rhythm in patients who have implantable defibrillators, resulting in a significant reduction of therapy and waiting time, and the creation of similar clinics in other parts of the UK to improve care.

INTRODUCTION

Ventricular tachycardia (VT) is a type of abnormal heart rhythm where the lower chambers of the heart (the ventricles) beat too fast. This can make it harder for the heart to pump blood effectively, which can lead to symptoms like palpitations, dizziness, and Syncope. Barts Cardiac Device clinic is one of the UKs largest device services treating over 5000 patients with implantable defibrillators, who have or are at high risk of VT. If VT occurs, this can be traumatising for the patient and swift, complete management of preventing further VT is paramount. We introduced a multi-disciplinary (MDT) VT clinic in 2018 to provide a standardised, holistic approach to preventing this life-threatening heart rhythm.

METHOD

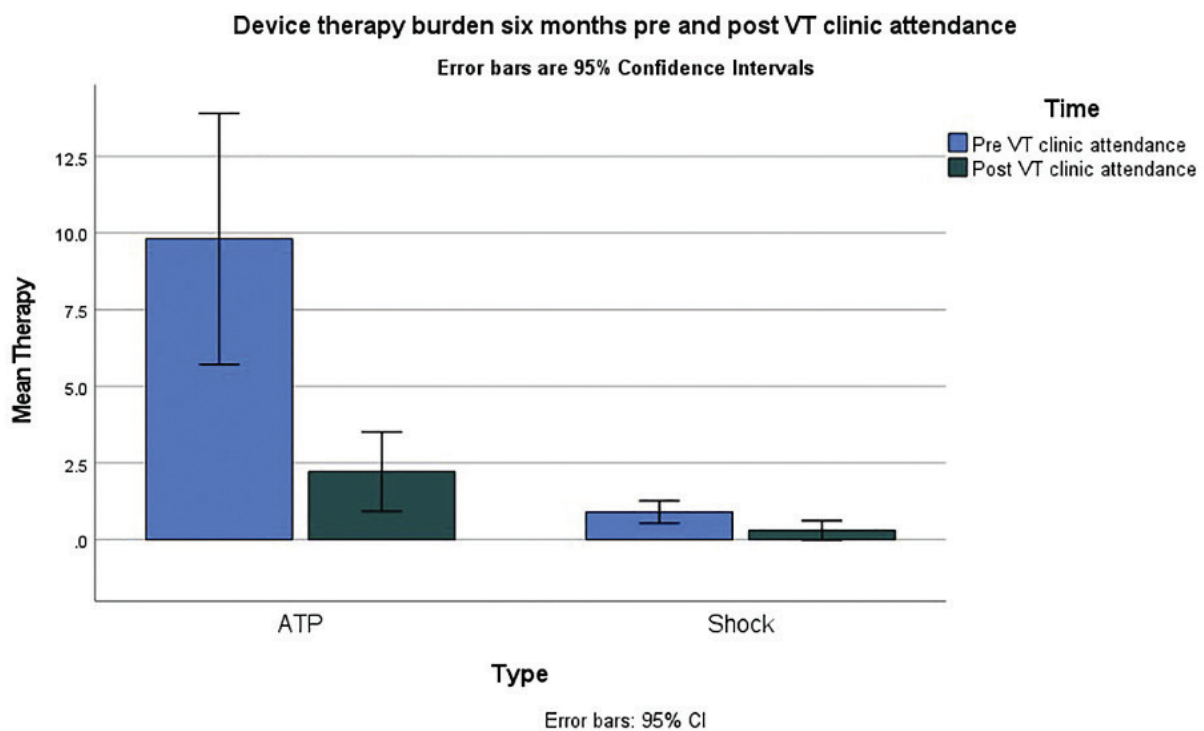
The clinic is collaboration between: Cardiac Scientists, Electrophysiologists, Heart Failure Consultants, VT fellows, Cardiac Psychologists and Respiratory Consultants. A staged intervention of patients occurs after the first episode of treated or sustained VT, aiming to prevent serious, traumatic arrhythmia occurring. This is done in a consult led by a Cardiac Scientist and VT Fellows overseen by a specialist VT Electrophysiologist. We aim to optimise device programming, heart failure medicines, anti-arrhythmic medications, iron levels, vitamin levels, lifestyle factors and, most importantly, patient understanding. If necessary, we also explain the risks and benefits of a VT ablation and advanced heart failure management.

RESULTS

We audited outcomes of the patients, which showed a significant mean therapy reduction was seen from 5.36 to 1.26 ($p < 0.001$) pre and post VT clinic attendance. An overall reduction in waiting time was noted from point of referral to the attendance in clinic (all urgent referrals were seen within 15 days).

CONCLUSION

The VT clinic is an effective and efficient way to manage life-threatening VT. It focuses on education and open discussions with patients to help them understand their condition and what to do if it happens again. Since starting our clinic, we have helped develop similar clinics in other parts of the UK to improve care for everyone. Most notably the Oxford VT clinic, which has phenomenally improved the care for another area of the UK. We hope to continue improving our service and help create local VT clinics around the world.



PREDICTING SYNCOPES RECURRENCE AND MORTALITY IN PATIENTS PRESENTING WITH SINGLE EPISODE TRANSIENT LOSS OF CONSCIOUSNESS (TLOC)

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ABOUT THE REPORT

A retrospective cohort study that aims to predict Syncope recurrence and mortality at 5 years in patients presenting with single episode TLOC.

INTRODUCTION

Syncope is a common presentation. Prognosis for Syncope varies, and is due to the underlying cause. Only 21% of patients who present with Syncope will have recurrence, and identifying the cause of syncope can therefore be challenging¹.

AIM

To predict Syncope recurrence and mortality at 5 years in patients presenting with single episode TLOC.

METHODS

Retrospective cohort study of single episode TLOC referred to a Syncope clinic at QEUH. Data was collected using the Electronic Patient Records (EPR) and analysed using descriptive statistics and Fisher's Exact Test. Patients were classified retrospectively using the Canadian Syncope Risk Score (CSRS).

RESULTS

Between 7th April and 29th September 2016, 48 patients were referred to Syncope clinic with single episode TLOC. Recurrence rate was 16.7%. Median age was 73.5 (IQR 15.8) years. Vasovagal Syncope was the most common final diagnosis. There was no statistically significant relationship between recurrence of Syncope and age, sex, CSRS, presence of prodrome, final diagnosis or cardiac tape abnormality. 5-year mortality was higher in patients aged >65 ($p=0.035$), with higher CSRS ($p=0.012$), and who had a final diagnosis of unexplained Syncope ($p=0.045$). Patients with final diagnosis of vasovagal Syncope had significantly lower rates of mortality ($p=0.002$). Discussion: We did not identify any predictors of Syncope recurrence, which suggests that identification of patients with higher risk of adverse outcomes is important on initial presentation, so they may benefit from early investigation and follow-up. The CSRS can help identify patients at risk of adverse outcomes.

CONCLUSION:

There is a low recurrence rate for single episode TLOC. Patients who were older, had a higher CSRS, and a final diagnosis of unexplained Syncope had higher mortality rates, suggesting that these patients should be identified early for further investigation and follow-up.

References:

1. Soteriades, Elpidoforos S et al. Incidence and prognosis of Syncope. New England Journal of Medicine vol. 347,12 (2002): 878-85. doi:10.1056/NEJMoa012407

Predicting Syncope Recurrence and Mortality in Patients Presenting with Single Episode Transient Loss of Consciousness (TLOC)

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Introduction

Syncope is a common presentation. Prognosis for syncope varies according to the underlying cause.

Only 21% of patients who present with syncope will have recurrence, and identifying the cause of syncope can therefore be challenging¹.

Aim



To predict syncope recurrence and mortality at 5 years in patients presenting with single episode TLOC.

Methods

Design

- Retrospective cohort study
- Single episode TLOC referred to the syncope clinic at the Queen Elizabeth University Hospital in Glasgow

Collection

- Data collected from Electronic Patient Records (EPR)
- 6 month period from April 2016 to September 2016
- Demographics, diagnosis, recurrence, prodrome, medical history, admission investigations, time to follow-up

Analysis

- Descriptive statistics and Fisher's Exact Test
- Patients classified retrospectively using the Canadian Syncope Risk Score (CSRS)

Results

7th April 2016 – 29th September 2016

48 patients referred to clinic

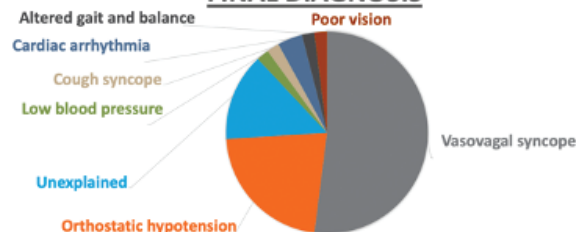


16 male 32 female Median Age **73.5** (IQR 15.8)

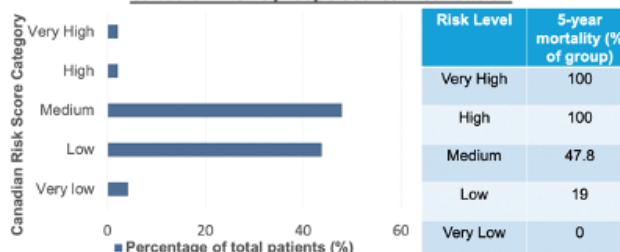


16.7% syncope recurrence rate

FINAL DIAGNOSIS



Canadian Risk Syncope Scores Distribution



- ❖ Age
- ❖ Sex
- ❖ CSRS
- ❖ Prodrome
- ❖ Final diagnosis
- ❖ Cardiac tape abnormality

Did not predict syncope recurrence

Vasovagal syncope was the most common final diagnosis and was associated with lower 5-year mortality rate (p=0.002).



5-year mortality

- ❖ Aged ≥ 65 (p=0.035)
- ❖ Higher CSRS (p=0.012)
- ❖ Unexplained syncope (p=0.045)

Conclusion

- ❖ Difficult to predict syncope recurrence, therefore identification of patients with higher risk of adverse outcomes is important on initial presentation.
- ❖ This can be achieved using CSRS.
- ❖ Patients at high risk of 5-year-mortality should be identified early for further investigation and follow-up.

References

1. Soteriades, Elpidoforos S et al. "Incidence and prognosis of syncope." The New England Journal of Medicine vol. 347,12 (2002): 878-85. doi:10.1056/NEJMoa012407



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THE 2023 SYNCOPE PIONEERS CENTRES OF EXCELLENCE

The following centres (listed alphabetically by location) are acknowledged as a Syncope Centre of Excellence. As evidenced by the case studies that have been submitted, and that have been published in this report, each centre takes an innovative approach to managing Syncope. Their work can be used to inspire other centres to improve care and quality of life for people with Syncope.

CANADA

Canadian Cardiac Care Live Continuous Remote (out-of-hospital) Cardiac Monitoring in Syncope

Wadea Tarhuni MD.FAHA.FESC, Mohamed Ramadan MD, A.Anuur MD, S.Sico MD, Mahmud W.Tarhuni, Ahmed Alghamdi MD, Mohamed Ahmed, MD.

*Canadian Cardiac Care, University of Saskatchewan
Department of Medicine, Canada*

www.canadiancardiac.com

IRELAND

The Impact of a specialist service in the Emergency Department on patients presenting with Syncope, falls or dizziness.

Dr Robert Briggs, Ciara Rice, Dr Amanda Lavan, Dr Robbie Bourke, Dr Kristina Jusmanova, Dr Geraldine Mc Mahon, Professor Conal Cunningham, Professor Rose Anne Kenny

St James Hospital, Dublin, Ireland

www.stjames.ie

THE NETHERLANDS

Implementation of the ESC Syncope Guidelines in the emergency ward with quick referral routes to a Syncope Unit improves diagnostic performance and lowers societal costs

Dr. Roland D. Thijs, Maryam Ghariq, Prof. J. Gert van Dijk, SYNERGY Consortium

Leiden University Medical Centre, Netherlands

www.lumc.nl

UNITED KINGDOM

Medical Detection Dogs - a cost-effective adjunct in ongoing PoTS management

Claire Pesterfield RN, MSc, Dr Claire Guest BSc (Hons) MSc HonDSc DHP BCAh FRSA, Simone Branch

Medical Detection Dogs, UK

www.medicaldetectiondogs.org.uk

Multi-disciplinary Specialist Ventricular Tachycardia Clinic

Mr Christopher Monkhouse, Dr Martin Thomas, Sarah Whittaker-Axon, Ruben Lamelas, Sam Martin, Luke Sevier, Ana Nogueira, Dr Edd Maclean, Dr Adam Dennis, Dr Anish Bhuvra, Dr Johanna Tonko, Dr Christopher Primus, Jenn Zhang, Dr Mehul Dhinoja

Barts Heart Centre, St Bartholomew's Hospital, London, UK

www.bartshealth.nhs.uk

The value of a multidisciplinary team (MDT) in managing patients with complex or unexplained Syncope

Dr Rebecca McCall, Dr Lesley Anderton, Dr Lara Mitchell

NHS Greater Glasgow and Clyde (NHS GGC), Scotland, UK

www.nhsggc.scot

Implementation and Development of Non-Medical Led Intra-Cardiac Monitoring Implantation Service

Mrs Carolyn Campbell-Cole, Kerrie Horkan

St George's Healthcare NHS Trust, London, UK

www.stgeorges.nhs.uk

Predicting syncope recurrence and mortality in patients presenting with single episode Transient Loss of Consciousness (TLOC)

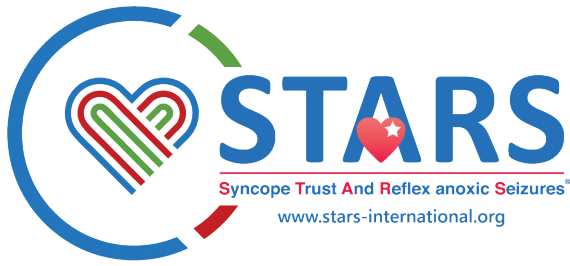
Dr Ming Huay Chin, Professor Matthew James Reed, Dr Lesley Anderton, Dr Lara Mitchell

Medicine for the Elderly, Queen Elizabeth University Hospital, Glasgow, Scotland, UK

www.nhsggc.scot



NOTES



Working together with individuals, families and medical professionals to offer support and information on Syncope and Reflex Anoxic Seizures

To view case studies, centres of excellence, Syncope healthcare pioneer reports or to submit a case study visit:
www.syncopepioneers.org

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