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| AGENDA ITEM |
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| 3.2.9 |
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| QUALITY & SAFETY COMMITTEE |
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| RADAR COMMITTEE REPORT |
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| Date of meeting | 24/05/2023 |
| FOI Status | Open/Public |
| If closed please indicate reason | Not Applicable - Public Report |

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|------------------------------------|---|
| Prepared by | Dr Richard Jones, Clinical Lead for Resuscitation and Acute Deterioration Vanessa Jones, Acute Deterioration Lead Bethan Harding, Resuscitation Manager |
| Presented by | Dr Dom Hurford, Exec Medical Director |
| Approving Executive Sponsor | Executive Medical Director |
| Report purpose | FOR NOTING |

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| Engagement (internal/external) undertaken to date (including receipt/consideration at Committee/group) | | |
|---|--|--|

| Committee/Group/Individuals | Date | Outcome |
|------------------------------------|-------------|----------------|
| RADAR committee | 20/03/2023 | NOTED |

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| ACRONYMS | |
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|-------|--|
| NEWS | National Early Warning Score |
| RADAR | Recognition of Acute Deterioration and Resuscitation |

SITUATION/BACKGROUND

- 1.1 The purpose of this report is to provide the Quality and Safety Committee with an overview of governance and activity across CTMUHB of the Recognition of Acute Deterioration and Resuscitation Committee (RADAR) over 2020-2023.
- 1.2 The attached annual RADAR report (appendix 1) describes the CTMUHB approach to Acute Deterioration and Resuscitation with reference to:

- The governance infrastructure in place and progress in the Recognising Acute Deterioration and Resuscitation programme.

2. SPECIFIC MATTERS FOR CONSIDERATION BY THIS MEETING (ASSESSMENT)

To note the Governance and quality response:

2.1 Structures

- 2.1.1 The improvement in CTMUHB governance arrangements since 2019 with the formation of the Recognition of Acute Deterioration and Resuscitation Committee (RADAR) and local (previously ILG) RADAR subgroups.
- 2.1.2 Recognition of the impact and progress made with the Acute Deterioration (AD) programme through the appointment of a Clinical Lead (medical) and an AD Lead (nursing).
- 2.1.3 The essential role of the Critical Care outreach team and the progress made towards establishing 24/7 service equity on all the acute sites across CTMUHB.

2.2 Acute Deterioration Processes

- 2.2.1 Updating and embedding NEWS Cymru to have a structured and unified approach across CTMUHB in all clinical areas to allow rapid objective detection of deterioration.
- 2.2.2 Awareness of our NEWS and Escalation Procedure that provides best practice guidance to health care professionals in determining and identifying patients within our care who are at risk of becoming unwell or presenting with abnormal physiological status.
- 2.2.3 The introduction of a new Sepsis Screening tool via the Sepsis improvement work plan and the Sepsis Working group
- 2.2.4 Adoption of the All-Wales Treatment Escalation Plan (TEP) as a response to linked work with mortality reviews, where appropriate escalation and de-escalation have been issues in the identified themes.

2.3 Outcomes and assurances

- 2.3.1 The establishment of audit and feedback processes to monitor and improve performance e.g., NEWS Cymru compliance audit, analysis of Rapid Response and Cardiac Arrest calls to assess the effectiveness of identification, escalation, and response to acute deterioration within CTMUHB
- 2.3.2 Standardisation of Rapid Response emergency calls throughout CTMUHB.
- 2.3.3 Progress with the establishment of 24/7 Critical Care Outreach (CCOT) services on each acute site: - Services are now 24/7 at Royal Glamorgan Hospital (RGH) and Princess of Wales (POW). Prince Charles Hospital (PCH) is currently at 12/7 service which is anticipated to become 24/7 following the induction of newly recruited staff by May 2023.
- 2.3.4 Establishment of standard operating procedures for CCOT.
- 2.3.5 Compliance with Welsh Government Sepsis Guidelines 2017.

3 KEY RISKS/MATTERS FOR ESCALATION TO BOARD/COMMITTEE

3.1 Structural

- 3.1.1 The continued work of RADAR and progress with acute deterioration management within the health board posts is at risk as funding for these two key posts (2.1.2) was identified until March 2023. These posts are now at risk in this financial year. Recurrent funding needs to be identified for Acute Deterioration and Resuscitation Medical and Nursing leads.
- 3.1.2 Critical Care Outreach teams being pulled/redeployed to cover other areas impacting on
- clinical rapid response to the acutely deteriorating patient and severe sepsis.
 - education and training for Sepsis+ NEWS Cymru,
 - measurement/audit of sepsis compliance.
- 3.1.3 Lack of dedicated accommodation for training in NEWS, Acute Deterioration, Sepsis, Rapid Response and resuscitation
- 3.1.4 Ongoing administrative support for local RADAR meetings.
- 3.1.5 Need to integrate RADAR into new Care Group governance processes.

3.2 Process/Outcome

- 3.2.1 Pace of progress limited by the current resource for acute deterioration.
- 3.2.2 Implementation barriers as staff not being able to attend training due to current workplace pressures
- 3.2.3 Barrier to compliance due to clinical pressures - 80% of suspected sepsis cases are located in our Emergency departments and Admission Units. Pressures in these areas make timely delivery of care and documentation of care a challenge
- 3.2.4 Need for IT infrastructure support to create a digital NEWS and Sepsis tool
- 3.2.5 Inability of clinical teams to visualise data collected around compliance. Need for Performance and Informatics resource / time to develop a real-time dashboard for frontline staff, senior clinicians and governance groups.
- 3.2.6 Need for Communications support to promote implementation, engage all staff groups and to advertise good practice.
- 3.2.7 Need for AMaT support to digitise Resuscitation Trolley Audits
- 3.2.8 Clinical pressures continue to impact on attendance at training. The Did not Attend (DNA) rate of all resuscitation training currently is 20%.
- 3.2.9 Electronic Staff Record (ESR) barriers to matching the revised training matrix to staff resuscitation competencies.
- 3.2.10 The 'train the trainer' approach has increased demand on training equipment e.g., manikins, and training Defibrillators.
- 3.2.11 Increased training demand for new areas/changes within the health board e.g., HMP Parc, Powys, Dental boundaries has not been met with an increase in training staff.
- 3.2.12 Barriers to enrolling in the National Cardiac Arrest Audit which would give us comparable data to benchmark our systems and training with national peers.

4 IMPACT ASSESSMENT

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|---|---|
| Quality/Safety/Patient Experience implications | Yes (Please see detail below) |
| Related Health and Care standard(s) | Timely Care If more than one Healthcare Standard applies please list below: |
| Equality Impact Assessment (EIA) completed - Please note EIAs are required for <u>all</u> new, changed or withdrawn policies and services. | No (Include further detail below) If no, please provide reasons why an EIA was not considered to be required in the box below. Not required |
| Legal implications / impact | There are no specific legal implications related to the activity outlined in this report. |
| Resource (Capital/Revenue £/Workforce) implications / Impact | There is no direct impact on resources as a result of the activity outlined in this report. |
| Link to Strategic Goals | Improving Care |

5 RECOMMENDATION

5.1 Quality & Safety Committee are asked to:

- **NOTE** the content of this report.
- **RECOGNISE** the role of a RADAR Clinical Lead and an Acute Deterioration Lead to drive improvement in this area.
- **RECOGNISE** the essential role that the Critical Care Outreach teams have in both the response to Acute Deterioration and in delivering education to reduce the impact of Acute Deterioration on the patient and on the Health Board.
- **RECOGNISE** the importance of good quality training in Resuscitation to ensure as good an outcome as is possible following Cardiac Arrest.

RADAR COMMITTEE

Cwm Taf Morgannwg
University Health Board

MAE EIN
GWERTHOEDD
YN EIN HELPU
NI I FOD AR
EIN GORAU
#CTMareingorau

RYDYN NI'N
GWRANDO,
YN DYSGŪ
AC YN GWELLA



WE LISTEN,
LEARN AND
IMPROVE

RYDYN NI'N
TRIN PAWB
A PHARCH



WE TREAT
EVERYONE
WITH RESPECT

RYDYN NI I GYD
YN CYDWEITHIO
FEL UN TIM



WE ALL WORK
TOGETHER
AS ONE TEAM

OUR VALUES
HELP US BE AT
OUR BEST

#CTMatourbest



Annual Report 2022

What will this Annual Report tell you?

Our Annual Report provides you with information about the Recognition of Acute Deterioration and Resuscitation (RADAR) Committee within Cwm Taf Morgannwg University Health Board (CTMUHB), what we do and how we work across the organisation to ensure quality and governance in patient care and safety, and what we plan to do to deliver and continually improve healthcare education, in order to meet changing demands and future challenges.

It provides information about our performance, achievements to date and what we intend to do to build on these.

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| 2.4 National Work | |

Introduction and Background

RADAR Context in Wales.

Health Services in Wales continue to deliver the vision, ambition and approaches that are needed to deliver 'A Healthier Wales' (1). The demand for services, increasing health and wellbeing inequalities, higher public expectations, the additional challenges due to the impact of COVID-19 on health and social care services, as well as the possibilities that new and emerging medical and digital technologies offer, are set against a backdrop of changing demography, recruitment and resource challenges as healthcare services reset and recover.

Context in CTMUHB

Background

In 2019 CTMUHB received a (Ref 1) Peer Review of Acute Deterioration Services report with a set of recommendations regarding areas for improvement.

The Peer review of Acute Deterioration Services is both a quality assurance and quality improvement programme that assesses the quality of the service being delivered by multi-disciplinary teams and local health boards in Wales. This assessment is set against a framework of local and national guidelines, Patient Safety Alerts and the overall Health and Care Standards for Wales and is underpinned by the principles of Prudent Healthcare.

Sepsis is a specific area of focus of the Acute Deterioration programme.

Also in 2019, the former CTUHB commissioned an external review of Resuscitation Services (Ref 2), where it was noted that governance arrangements regarding the Resuscitation Committee needed to be more robust.

The review team felt that the service should focus more on identifying the organisation's training requirements in relation to the deteriorating patient.

In response to recommendations from both reviews, and practice in other health boards, a new CTMUHB governance infra-structure was created in bringing together resuscitation and acute deterioration (including sepsis) under the consideration of one committee – Recognition of Acute Deterioration and Resuscitation (RADAR) (Ref 3). RADAR reports directly to the Executive Leadership Group, via the Medical Director with links to the Quality & Safety Committee

Two key clinical appointments were made to lead, direct and co-ordinate RADAR activity:

- Medical Clinical Lead x 2 sessions/ week.
- Acute Deterioration Lead Nurse WTE Band 8A. (*key recommendation from Peer Review)

These posts are currently hosted by Clinical Education.

The continued work of RADAR and progress with acute deterioration governance and management within the health board is at risk as current funding for these two key posts is only until March 2023.

2 RADAR Committee

2.1 Policy and Governance

2.2 Quality Improvement – Acute Deterioration Processes including Sepsis

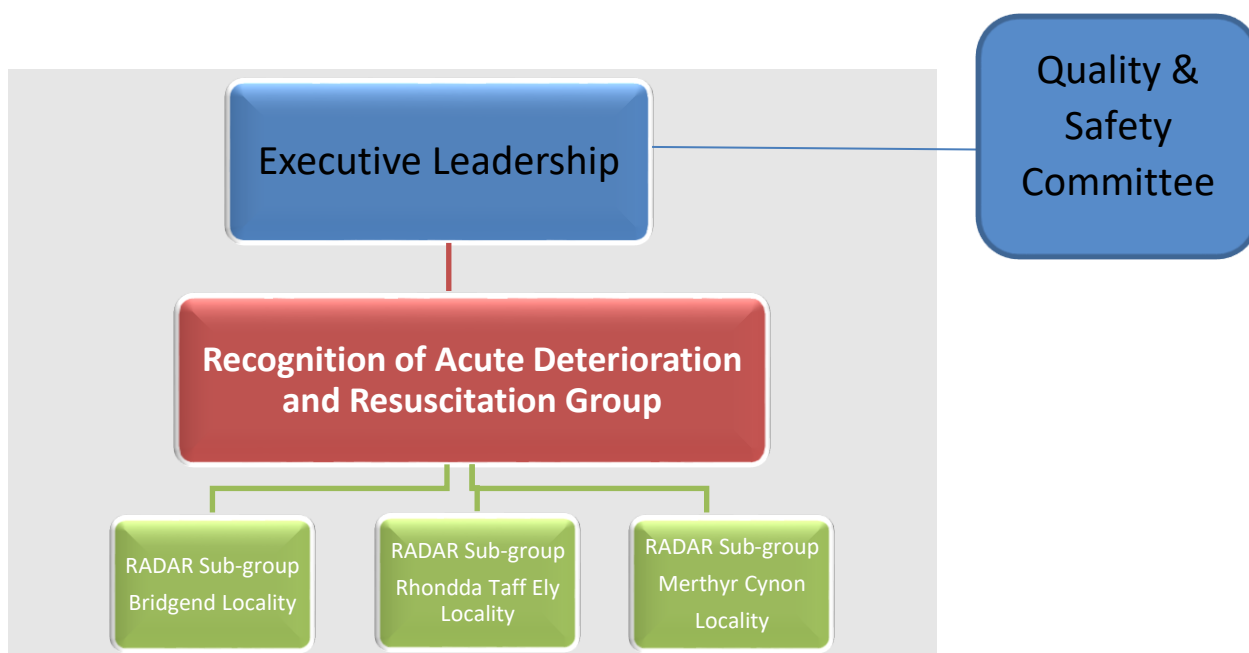
2.3 Education and Training

2.1 Policy and Governance

Organisational governance around resuscitation and acute deterioration has been further developed and aligned. The overarching CTMUHB RADAR Committee (Recognition of Acute Deterioration and Resuscitation) is responsible for the strategic management of all Recognition of Acute Deterioration and Resuscitation related issues within the organisation, supporting the provision of appropriate and effective patient care through implementing operational policies governing the prevention of cardiac arrest and those governing cardiopulmonary resuscitation, practice and training. This approach brought together a number of work streams in order to reduce avoidable mortality and morbidity by improving the function of health board systems that enable early recognition and treatment of deteriorating patients, and cardiopulmonary resuscitation.

It is chaired by the AMD for Quality and Effectiveness on behalf of the Medical Director with a Medical Consultant appointed as the Clinical Lead. There is a Lead post for Acute Deterioration which commenced in January 2021 to develop and embed a structured and unified approach across Cwm Taf Morgannwg University Health board (CTMUHB) in the identification, escalation and response to the acutely unwell patient.

The internal structure of the subgroups of RADAR will be further re-aligned over 2023 with the establishment of the new CTMUHB organisational structure.



2.1.1 Supporting services

Resuscitation service

The Resuscitation Service for CTMUHB has a significant focus on providing training to ensure health care professionals are competent and up-to-date with the relevant life support skills for their roles. A training and resuscitation equipment service is also provided to Powys Training Health Board, General Practices and Dentists among other SLAs. This service is also a Resuscitation Council Accredited Training Centre for Level 4 Life support training.

Critical Care Outreach Service

In order to provide a 24-hr response to acute deterioration the Critical Care Outreach teams have been expanded.

Current Outreach establishment

- Princess of Wales Hospital 7WTE (2 x band 7, 5 x band 6) 24/7
- Royal Glamorgan Hospital 7WTE (6 x band 7, 1 x band 6) 24/7
- Prince Charles Hospital 7WTE (1x band 7, 6x band 6) 12/7* (*plus Friday/Saturday nights to go 24/7 May 2023)

The expansion of the teams allow a critical care outreach presence at all rapid response calls. The establishment of 7 WTE per site allows for a vital teaching role to be included, which supports the provision of training on acute deterioration, NEWS, sepsis and acute kidney injury (AKI). Due to increased demand for both clinical workload and education, bids have been submitted to expand the teams to 8WTE on each site.

The service continues to face challenges where outreach staff are called back to cover gaps in ITU, emergency departments and areas of high acuity. Strategic direction and leadership are required for this team and service and moving forward could be provided by the acute deterioration lead post.

2.4 Quality Improvement – Acute Deterioration Processes

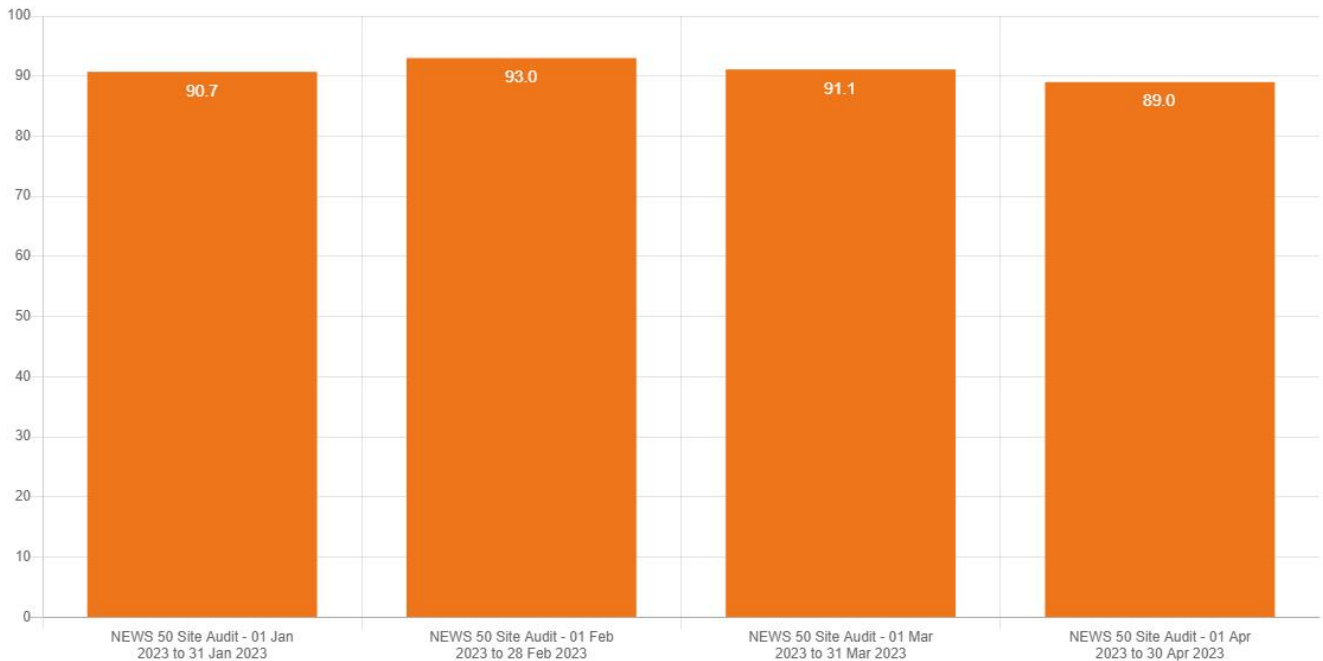
2.2.1 NEWS Guidance

The focus of work is to have a structured and unified approach across Cwm Taf Morgannwg University Health board (CTMUHB) in the areas set out in the Welsh Government (WG) Task and Finish group report on provision of critical care outreach services in Wales ^{Ref} and compliance with Welsh Government Sepsis (2017) guidelines (^{ref 5}) including the use of the National Early Warning Score (NEWS) in all clinical areas to allow rapid objective detection of deterioration.

As a direct result of the work led by the Clinical Lead and the Acute deterioration lead posts, NEWS charts have been updated in alignment with NEWS2 principles and rolled out as 'NEWS Cymru' charts (^{ref 7}) standardised across all acute and community hospitals in CTMUHB. Specific education and training to support the standardisation has been provided to all staff and incorporated into existing training programmes e.g., Health care support worker induction training and our resuscitation training programmes.

In order to provide assurance within the health board that the NEWS charts are completed accurately and appropriately escalated an audit pro forma has been developed based upon NICE CG50. Data is entered monthly onto the Audit Management and Tracking (AMaT) system. Results are disseminated to all ward managers, senior and head of nursing for review. Any compliance issues are also discussed within the ILG Recognition of Acute Deterioration and Resuscitation RADAR meetings. NEWS audits are used to provide evidence of learning in Learning from events reports (LFER).

Fig 1. CTMUHB NEWS audits Jan23-April 23



2.2.2 NEWS and Escalation Procedure

This clinical procedure has been produced to provide Cwm Taf Morgannwg University Health Board (CTMUHB) best practice guidance to health care professionals in determining and identifying patients within our care who are at risk of becoming unwell or presenting with abnormal physiological status.

The procedure specifically provides a framework through which doctors, registered nurses, healthcare assistants and allied healthcare professionals are informed of their responsibilities in relation to: -

- the minimum standards for monitoring patient's physiological observations
- recording and communicating the results of the monitoring of such physiological observations
- the minimum actions and referral route that must be taken in accordance with the NEWS scoring system

2.2.3 Sepsis Screening Tool

Sepsis

Sepsis is a complication of infection in which a *dysregulated host response is associated with organ dysfunction and increased risk of death*. It is estimated that there are in the region of 500 'suspected sepsis' admissions per year in CTMUHB, with a mortality of about 7%.

Early recognition and response to Sepsis improves outcome.

Sepsis is one of the leading causes of Acute Deterioration and therefore our response to the Acutely Deteriorating patient has Sepsis at its core. Our response to Sepsis is built upon the response to all forms of Acute deterioration i.e., recognition, escalation and timely response by appropriately trained clinicians.

The entry criteria for recognising "Sepsis" are the Suspicion of infection PLUS a NEWS score of 3 or more. This should lead to a patient being screened for sepsis using a *sepsis-screening tool*.

**A note on tools*

Screening tools are used to help clinicians make a judgement on a likely diagnosis at the bedside in a timely manner. Waiting many hours for microbiological confirmation is obviously not an option. There are several tools used for screening a patient for Sepsis. They have varied sensitivities and specificities and no individual tool is ideal. Tools that are too sensitive over-estimate the likelihood of sepsis and lead to many people being over-treated with antibiotics and fluids. This in itself is harmful but added to this is the risk that treating a non-septic patient as septic leads to the true diagnosis being missed e.g.: heart failure, pancreatitis etc. Tools that are too specific under-estimate the likelihood of sepsis leading to patients not receiving essential, early antibiotics. Tools that are overly complicated are difficult for staff to follow and are not practical in most clinical situations as presenting cases seldom conform to rigid protocols.

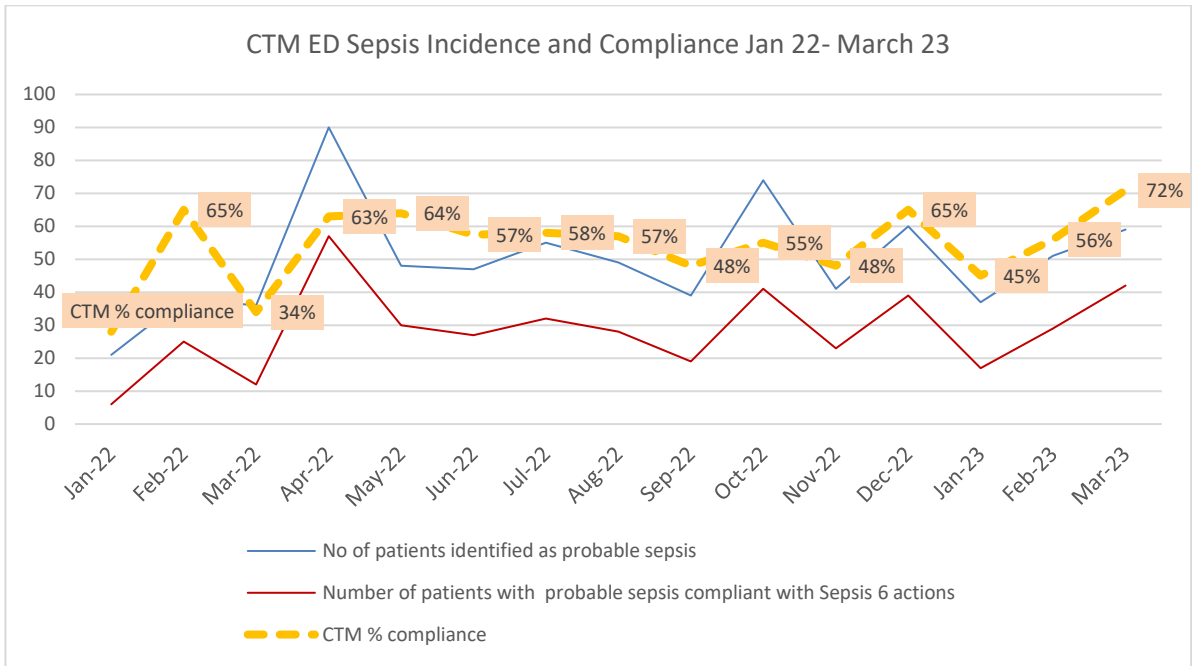
Sepsis is one of the main causes of acute deterioration and if not identified and treated in a timely manner can lead to multi-organ failure, admission to Intensive Care and death.

In CTMUHB historically there were several sepsis screening tools in use. To ensure consistency in the identification of sepsis within the hospital setting a new sepsis tool was developed using a collaborative approach between pharmacy, medical and nursing leads and using the NICE guidelines and the new guidance from the Academy of Medical Royal Colleges. We introduced it into our Emergency Departments (where we see 75% of Sepsis presentations.) Over the course of the year through a great effort in education we have rolled it out to the rest of our hospitals. The new sepsis tool focuses on risk stratifying patients into categories to ensure those at most risk receive timely care. (Ref 4)

To support the timely administration of antibiotics, the first line antibiotics for use within Emergency departments was standardised and a QR code attached to the tool which links to the Antibiotic guidance. This has helped to reduce the time to prescription and administration of antibiotics in the patient with probable sepsis.

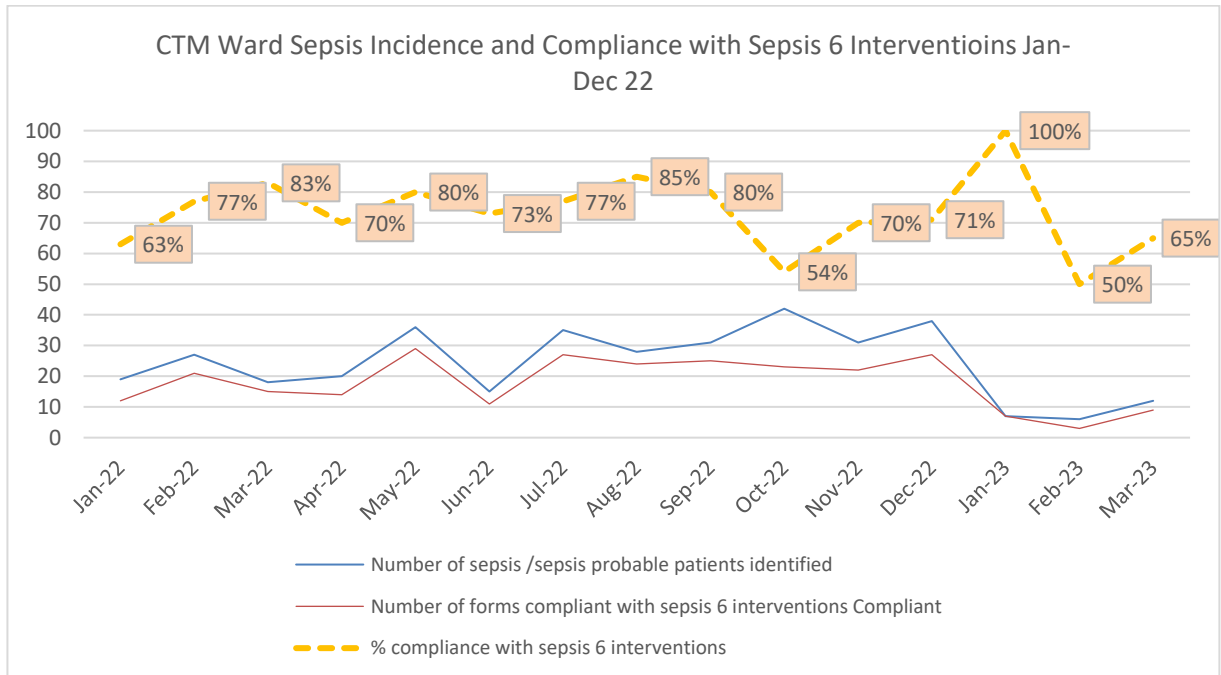
The sepsis tool was trialled within the three Emergency departments for a period of three months. Initial results indicated an increase in the use of screening from 7 screening forms to 90 forms per month and an increase in compliance from 34% to 63% with timely treatment.

CTM Emergency Department Sepsis Incidence and Compliance



Following on from the initial trial in ED the sepsis screening tool has been introduced into *all wards* within RGH/PCH/PoWH. Ongoing work continues on providing meaningful data from all sites

CTM Ward Sepsis Incidence and Compliance



2.2.4 Acute Kidney Injury (AKI)

The National Confidential Enquiry into Patient Outcomes and Death report (NCPoD) in 2009 demonstrated poor management of acute kidney injury (AKI) throughout the UK. In the UK up to 100,000 deaths each year in hospital is associated with acute kidney injury. Up to 30% could be prevented with the right care and treatment. NICE recognises this, and

identified only 50% of cases with AKI documented as cause of death received satisfactory or good care (NCEPOD 2009).

In order to improve the management of AKI within CTMUHB an AKI steering group was developed and an AKI sticker bundle was drafted which prompts actions for Medical/nursing staff when patient has an AKI. The AKI steering group reports into RADAR.

The AKI sticker bundle has been introduced into the acute medical wards within RGH, and the care of the elderly wards (COTE) wards in POWH. To measure sticker compliance an audit has been developed on AMaT to ensure that AKI alerts are being managed appropriately and in a timely manner and to identify areas of low compliance to make improvements. Ongoing roll out will take place within all sites in 2023.

2.2.5 Fluid Balance

Fluid balance is an essential tool in determining hydration status. Accuracy in recording fluid intake and output is vital to the overall management of certain patient groups and facilitates the assessment and evaluation of the patient's condition. In addition, accurate fluid balance is an essential component in the prevention and management of an AKI.

In order to improve compliance with recording of a patient's fluid balance status a whole site audit within Royal Glamorgan Hospital and within the Care of the elderly (COTE) wards at POWH were conducted. The results of the audit identified areas for improvement. Ongoing work is being done with the Health Care Support Worker (HCSW) team to develop a fluid balance training session Registered nursing staff are educated via the CCOT within the acutely unwell study days and on the ward teaching. To underpin fluid balance training a procedural document has been written.

The purpose of the procedure is to raise staff awareness by providing a clear set of standards in managing optimal hydration and effective fluid balance. The aim is to guarantee that health care staff apply a consistent and safe approach to maintaining assessing and recording of individual patient's fluid balance. The intention is to create a set method for recording a detailed and accurate fluid balance by establishing effective standards and management for optimal hydration while supporting staff to determine an appropriate and timely rationale for starting and stopping a fluid balance.

To provide assurance on compliance a monthly fluid balance audit is conducted within RGH site which will be introduced to all sites within 2023.

2.2.6 Burden of Acute Illness

Knowledge of how many acutely unwell we have in our acute hospitals in any one period of time is vital to plan provision of services for Acute Deterioration.

We conducted an audit to assess the burden of acute illness within each secondary care hospital over a 24-hour period and to review the escalation process in order to provide assurance around the management of acute deterioration on each site. (Ref 4)

We looked at these parameters:

The number of NEWS charts in each clinical area

The number of patients scoring NEWS ≥ 6 in each area

The number of patients who scored $\geq 6 - 8$ who were escalated in line with policy

The number of patients scoring ≥ 9 in each area who were escalated as per clinical policy

We undertook a separate review into:

The number of rapid responses calls in previous 24 hours

The number of admissions to Critical Care in previous 24 hours

The number and location of cardiac arrest calls in previous 24 hours

2.2.7. Resuscitation and Clinical Skills

The resuscitation service for CTMUHB currently has 12 members. This consists of 1 resuscitation manager, 3 resuscitation practitioners, 3 resuscitation training officers, 3 Clinical skills officers and 2 administrators. Currently there are 6 members of the team who are actively training, however, 3 of these have additional managerial responsibilities within the UHB. In addition to this they provide a service to Powys Health Board, GPs, Dentals and other SLAs.

Throughout 2021-22, there was a focus on standardisation of Resuscitation Standards in CTMUHB. This included a complete review of the CTMUHB resuscitation policy, and a renewed resuscitation training compliance matrix for the organisation.

Additionally, the resuscitation equipment was standardised across the health board, with a major change to equipment taking place in Princess of Wales Hospital with the rollout of new resuscitation trolleys across what was then the Bridgend locality group.

The standardisation of equipment, along with the rollout of the Rapid Response Calls, has not only improved patient safety, but has also rationalised equipment with a significant reduction in equipment utilised.

During 2021-22 the Royal Glamorgan Hospital and Prince Charles Hospital, received 40 new defibrillators along with the relevant training of staff to ensure competence and safe use.

The service also provided support and training for staff to roll-out a new standard operating procedure in Ty Llidiard, as part of the response to a Welsh Government investigation into a recent incident. This included working closely with Welsh Health Specialised Services (WHSSC) Committee and Welsh Ambulance Service NHS Trust (WAST) to create a hybrid 2222/999 response to emergency calls.

2.2.8 Rapid Response Systems

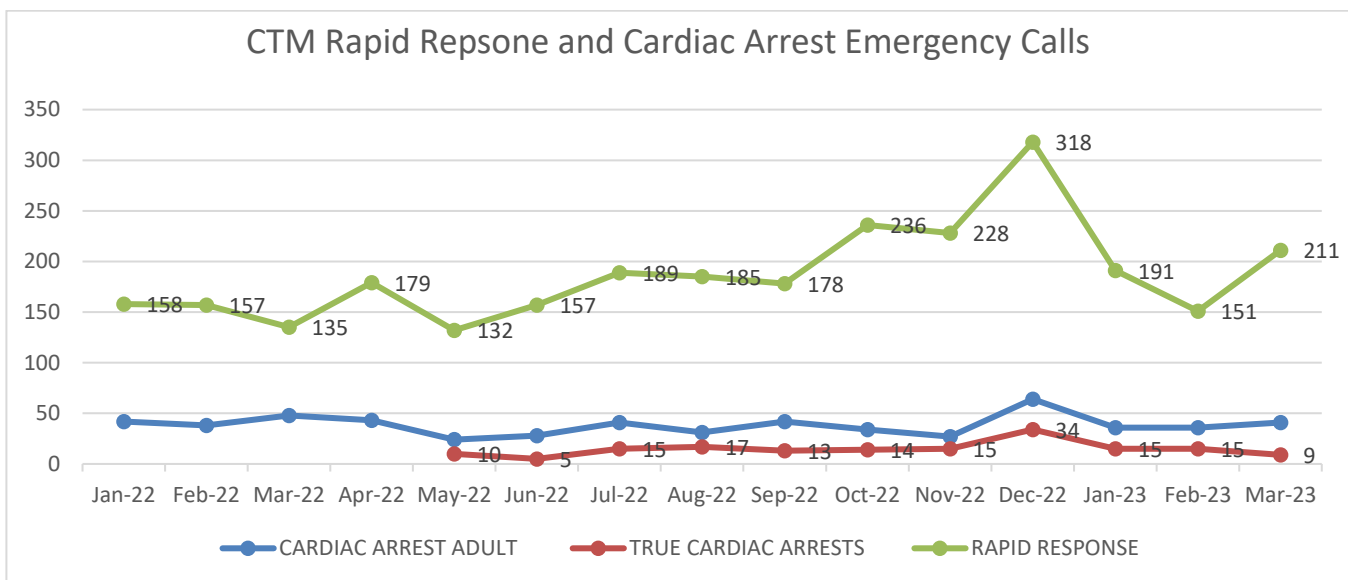
Clinically significant deterioration of patients admitted to general wards is a recognized complication of hospital care. Rapid Response Systems aim to reduce the number of avoidable adverse events. Over the last 2 years in CTMUHB we have standardised our Rapid Response Call to a NEWS of 9 or over. Rapid arrival at the bedside of the appropriate team has led to patients being seen earlier in their deterioration. Access to Critical Care is enhanced, ward-based treatments are maximised and decisions on further management e.g.: end of life decisions are clarified.

Quality metrics for the evaluation of Rapid Response Systems recommended by the International Society of Rapid Response systems (ref 5)

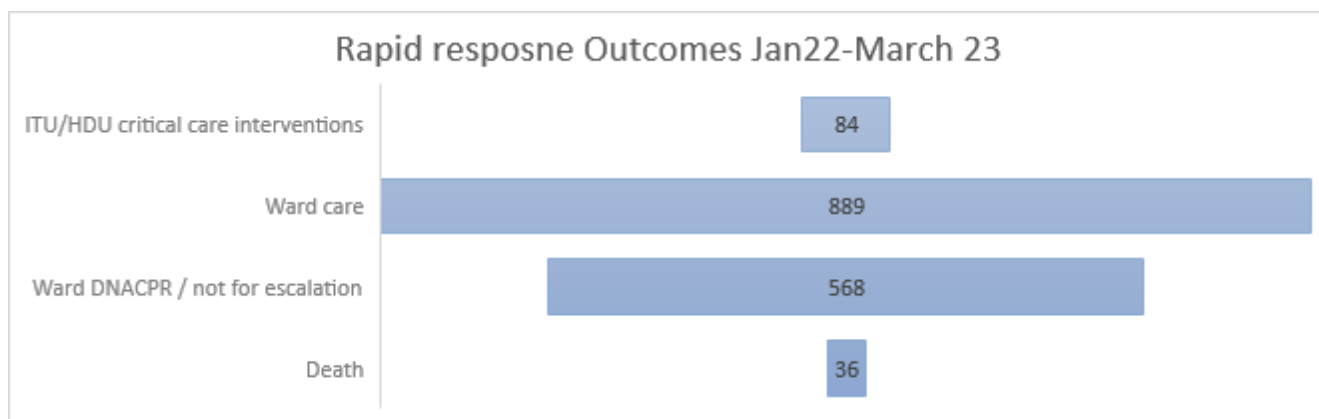
| Metrics | Method of data collection | Rationale | How we will do this |
|---|---|--|--|
| Hospitals should measure and track cardiac arrests in regular ward patients | Measure all cardiac arrests occurring within the ward environment | Rates of cardiac arrests on general wards can be seen as an indicator of an organisations ability to appropriately identify and manage patients who deteriorate | We compile a monthly list from switchboard of 2222 calls and input onto AMAT, differentiating which are for Cardiac Arrest and which are for Rapid response |
| Hospitals should measure predictable cardiac arrests in general ward patients | Cardiac arrest occurring in hospitalised ward patients who met the hospital's escalation threshold at least 30mins prior to and within 24 hr of the cardiac arrest. | IHCA associated with a mortality risk of 80% historic data show that there are preceding derangements in patient observations for up to 8 hours prior to the CA. This forms the basis for escalation criteria for the RRS. | From the RR/CA audit form we have a record of monthly Cardiac arrests that had a NEWS > 6 in the 24hrs prior to arrest. |
| Hospitals should measure timeliness of their response to ward patient deterioration | measure hospitalised patients who received evaluation by staff with critical care skills or advanced skills within the pre specified time | To assess whether the response of the RRS is timely | There is a box on the audit form that is Y/N for a timely response. Rather than having specific response times in there it may be a judgement call of the auditor whether there was a timely response or not |
| Hospitals should evaluate timeliness of critical care interventions | Proportion of hospitalised ward patients who receive critical care within 6 hrs of an escalation criteria breach | To measure the facilitation or provision of critical care within 6 hrs. Respiratory support invasive/non invasive Vasopressors/ inotropes | In the rapid response box, we record Critical Care intervention and a Time (which could mean transfer to ITU or intervention on the ward or t/f to theatre etc) |

| | | | |
|--|---|---|---|
| | | Invasive monitoring | |
| Patients that exhibit warning signs should receive a timely documentation of goals of care | Proportion of hospitalised ward patients who had goals of care discussions either in place or newly documented by a clinical provider within 24hrs of first breaching the escalation criteria | Delays of care at either end of palliation-invasive spectrum are associated with avoidable morbidity. The deteriorating patient's best interest can only be served if a treatment plan communicating the goals of care is developed and implemented at this time. | This is recorded in the DNACPR/Not for escalation box. |
| Hospitals should provide means by which patients and family members can activate the rapid response team | | | This is under discussion. |
| Hospital should consider measuring the frequency of RRT activations by patients and family members | | | This would be easy to measure if and when we proceed with family member activation. |
| Hospitals should evaluate safety culture in relation to deteriorating patients and their care | The hospital uses a survey tool regularly to evaluate hospital staff perceptions of safety culture in relation to the Rapid response systems | RRS organisation wide patient focused systems to be developed to prevent potentially avoidable deaths and serious adverse events as cardiac arrests. Culture and attitudes of an | The regular Staff feedback form on Outreach records this. |

| | | | |
|---|---|--|--|
| | Adapt existing tool. | organisation affect patient outcomes | |
| Hospitals should measure the length of stay on general wards of all patients with breach of escalation criteria | Measure total length of stay for ward patients who breach escalation criteria differentiated from those patients with timely documented goals of care. Should include ITU LOS | RRS operates under the premise that early identification of patients experiencing clinical deterioration leads to early intervention and better clinical outcomes. | A NEWS of 9 is a rapid response call. Further administrative support needed to ascertain this data. |
| Hospitals should measure ICU length of stay of patients transferred to ITU following breach of local escalation criteria. | Measure the length of stay for patients admitted to ITU from the ward within 24hrs of triggering deterioration. Patients admitted with delayed initiation of critical care should be differentiated from those with prompt escalation of care. | Value in healthcare is defined as the health outcomes achieved relative to their financial cost. The cost of emergency ITU admissions from general wards unknown | This is deliverable if and when as above, administrative support is forthcoming. |



Graph illustrates the total number on monthly Rapid response calls, Cardiac Arrest calls and true Cardiac Arrest calls within PCH/RGH/POWH January –December 2022 * Feb and march data to be checked against switchboard



Rapid Response outcomes for RGH/POW/PCH sites Jan 22-March 2023

2.2.9 Treatment Escalation Plans (TEPs)

A TEP form is a way of the healthcare team recording a patient’s individual care plan should they deteriorate in an emergency, focusing on which treatments may or may not be most helpful to them. The information recorded on the TEP form helps to guide healthcare professionals in an emergency, as to which treatments would or would not help an individual patient.

A TEP encourages a patient and their team to discuss certain aspects of treatment in advance, promoting careful planning. A TEP ensures that a patient does not receive treatments that they wouldn’t want.

In CTMUHB we have adapted and adopted the All-Wales TEP template and are committed to rolling this out for all new acute admissions. (Ref 6)

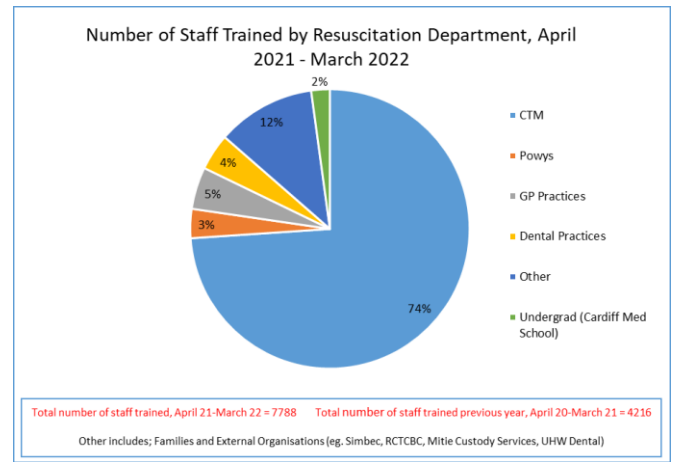
DNACPR Sharing and Involving- A Clinical Policy For Do Not Attempt Cardiopulmonary Resuscitation (DNACPR) for Adults in Wales.

This policy was updated in April 2022 and recommends a biennial audit into documentation of the DNACPR discussion using the DNACPR forms. Our most recent audit is available on request along with an action plan. The audit is being repeated in May 2023. (Ref 7)

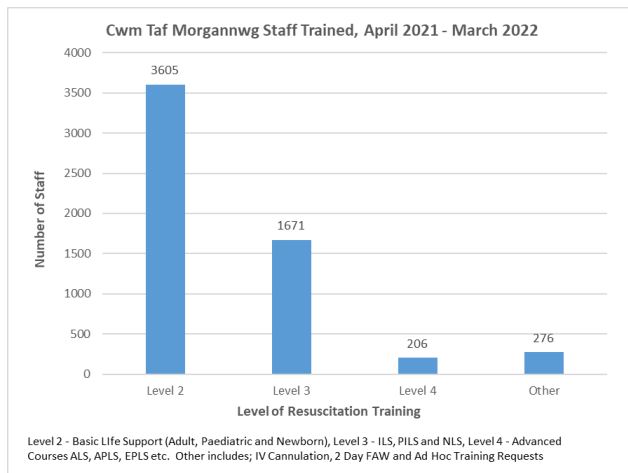
2.3 Education and Training

2.3.1 Resuscitation training

The Resuscitation Service continues to deliver mandatory life support training from Level 1-3 (graph 1 and 2), for CTMUHB, Powys HB and all local GP's and Dentists. The department is also a leading National provider in the delivery of Level 4 Advanced Resuscitation Courses, for Adults, Paediatrics, Newborns and Trauma. These courses are delivered on an income generation basis, with internal and external faculty engagement required to deliver. The number of staff trained is outlined below



Staff trained, April 2021 to March 2022



Level of training numbers

Vaccination Teams across the UHB have been supported with training to enable them meet the urgent demand throughout the Covid-19 pandemic. Upskilling training was also delivered to 44 ITU staff and 52 Paediatric staff with level 3 Paediatric Immediate Life Support (PILs) in response to the Respiratory Syncytial Virus (RSV) risk.

Over the past year, the Resuscitation Team worked collaboratively with the Practice Development Nurses and Midwives (PDN & PDM) to deliver 'Train the Trainer' (TTT) 'in house' training programmes for Level 2 Basic Life Support, increasing flexibility and opportunity to offer further training places and therefore increasing compliance. This in turn releases time for the Resuscitation Practitioners and Training Officers to focus on the delivery of Level 3 training, organising and facilitating debriefing sessions following arrest calls, investigating and preparing evidence for Rapid Reviews and scrutiny panels, attending 2222 calls, cardiac arrest audits, and Datix queries. Through this activity areas for improvement are identified and training needs incorporated into future training programmes. E.g., redesign of the cardiac arrest audit form. The revised audit enables identification of areas needing improvement in training and provides a trail of decision making.

In order to meet service demand and provide the UHB with the most appropriate training, alternative training packages have been considered beneficial. Following investigation into the prevalence of sick patients and cardiac arrests in our Community Hospitals, it has been agreed to offer qualified nursing staff a bespoke package, which includes Basic Life Support, Sepsis and AKI, among other things. This package is being designed in conjunction with the UHB's Critical Care Outreach Teams. This will replace the previous training of ILS, which is more suitable for acute sites. This has enabled the service to increase the number of

participants on each course and collaboration between Resus and CCOT has increased training delivery capacity.

Additionally, training for other allied health professionals has been reviewed, identifying appropriate level of training for the role being undertaken e.g., level 2 rather than level 3, as they are either looking after “well patients” in outpatient departments or in an area covered by CCOT/2222 calls and where the patient should be accompanied by a nurse i.e., Radiology. In response to changes to the Resuscitation Council UK Guidance regarding the suitability of Paediatric ILS up to the age of 18, we have changed training requirements for staff working within Ty Llidiard to reflect this.

The changes to CTMUHB training compliance standards to more appropriate requirements for each health care role and the promotion of Train the Trainer packages are intended to enable increases in compliance for Resuscitation training (for training matrix please see ref 11).

2.3.2 Critical Care Outreach Service

The Critical Care Outreach Teams (CCOT) deliver acute deterioration training within the secondary sites. NEWS training is also provided by the health care support worker programme and the resuscitation practitioners during Immediate Life Support and Advanced Life Support.

To complement the Immediate Life Support (ILS) course provided by the resuscitation team, the Acute Life-Threatening Events-Recognition and Treatment (ALERT) course has been introduced across CTMUHB for all registered nursing staff. This ensures a unified approach to education to manage an acutely unwell patient within a ward environment. The plan for 22-23 is to extend the provision of the course and develop a multi-professional faculty to facilitate, this would provide best learning environment for the candidates on the course.

| Title | Sites | Frequency | Staffing and hours |
|--|-------|-------------|----------------------|
| Acutely unwell study day | All | Monthly | X6 staff total 36hrs |
| ALERT | All | Monthly | X6 staff total 36hrs |
| NEWS | | Weekly | 12 hrs. monthly |
| Sepsis | | weekly | 12 hrs. monthly |
| AKI | | Weekly | 12 hrs. monthly |
| Newly Registered Nursing Induction Programme (NRNIP) | All | Bi-annually | 6 hrs. annually |
| Student Nursing Programme | All | Bi annually | 18hrs annually |
| CTM Tracheostomy training | All | Monthly | 6hrs monthly |

2.4 National Work

The focus of RADAR since it commenced in 2021 has been on establishing fit for purpose ways of working across CTMUHB. It has noted activity ongoing at a National Level and has

been working to identify what would be appropriate to engage with further. This is an area of focus and further development over 2023-24.

2.4.1.1 Work within UK

Resuscitation Council UK. (RCUK)

CTMUHB adheres to the RCUK's guidelines for protocols and training of staff. The RCUK are a collaboration of research councils working effectively to enhance the overall impact and effectiveness of resuscitation research, training and innovation activities in the delivery of the government's objectives for science and innovation.

The National Cardiac Arrest Audit (NCAA)

The NCAA monitors and reports on the incidence of, and outcome from, in-hospital cardiac arrest in the UK in order to inform practice and policy. The vast majority of organisations in the UK are enrolled in the audit but no LHB in Wales is. A paper was submitted to the RADAR committee in 2021 which agreed that CTMUHB should participate in the NCAA. We are working with the Welsh Resuscitation Forum on taking this forward.

Academy of Medical Royal Colleges (AoMRC)

A recent paper from the AoMRC (Ref 9) led healthcare organisations across the UK to review their approach to Sepsis screening. In summary, the paper acknowledges there is a balance to be found between early antibiotic administration and the danger of over-use of antibiotics and that priority is given to sicker patients based on NEWS scoring. Decision to treat should come from early review by a senior clinical decision maker.

Both at an LHB and a Wales level we are engaged in addressing the paper.

2.4. 2 Work within Wales:

The predecessor to Improvement Cymru, 1000Lives+, had several national workstreams focussed on Acute Deterioration pulled together via the Rapid Response to Acute Illness learning set (RRRAILS).

CTMUHB worked closely with RRAILS and led the way in updating and standardising our approach to NEWS, sepsis and AKI.

After a 4-year hiatus, Improvement Cymru, at the behest of Welsh Government, is attempting to set up a National Acute Deterioration Faculty: an expert panel that will review the current evidence and make recommendations to LHBs in Wales.

The Clinical lead for RADAR and Lead for Acute Deterioration are key members of this expert panel and expect CTMUHB to be at the forefront of any changes.

Up until last year Welsh Government required all LHBs to submit monthly data on Sepsis incidence and compliance. It is expected that Welsh Government will resume a requirement for data when the Acute Deterioration Faculty advises it what data is meaningful to collect.

Our Lead for Acute Deterioration is the Chair of the Welsh Outreach Forum, a part of the UK National Outreach Forum. Regular meetings occur where peers share service innovations and discuss future collaboration.

The Sepsis in Wales group has recently been set up to bring all LHBs together to update and standardise our approach to Sepsis screening following the publication of the Academy of Medical Royal College's Sepsis paper. The group is chaired by our Clinical lead for RADAR.

Welsh Advanced and Future Care Planning Group:

In the vast majority of clinical interactions, the response to Acute Deterioration is good. Often, where the response is less good, the problem lies in issues around appropriateness

of escalation. Too often, patients in the last few hours of a natural and anticipated death are subjected to investigations and interventions that are futile and distressing for them and their families.

We receive regular reports from the Mortality Review process which illustrate these issues. Thoughtful, early advanced care planning aims to reduce these issues.

In CTMUHB our work to roll out Treatment Escalation Plans is key to ensuring good, prudent and dignified care to all our patients.

Reference for papers All available on request

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|--|--|
| 1 CTUHB Peer review report: | 2 Resuscitation Services review |
| 3 RADAR TOR | 4 WG critical care report |
| 5. CTM Sepsis Screening Tool | 6. Burden of Acute Illness Audit |
| 7. TEP policy/form/patient information leaflet | 8. DNACPR audit and Policy |
| 9. AoMRC Statement on Antibiotics In sepsis | 10. International Society for rapid response systems Metrics |
| 11. Cardiopulmonary policy and Resuscitation Training matrix | |