



AGENDA ITEM

5.4

PLANNING, PERFORMANCE & FINANCE COMMITTEE

SEPSIS COMPLIANCE IMPROVEMENT PLAN

Date of meeting	28/02/2023
FOI Status	Open/Public
If closed please indicate reason	Not Applicable - Public Report
Prepared by	Dr Esther Flavell/Richard Jones/Vanessa Jones
Presented by	Dr Dom Hurford
Approving Executive Sponsor	Executive Medical Director
Report purpose	FOR NOTING

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

Committee/Group/Individuals	Date	Outcome
RADAR committee		NOTED

ACRONYMS

RADAR	Recognition of Acute Deterioration and Resuscitation
NEWS	National Early Warning Score
CTMUB	Cwm Taf Morgannwg University Health Board
PCH	Prince Charles Hospital
POW	Princess of Wales Hospital
RGH	Royal Glamorgan Hospital
CCOT	Critical Care Outreach Team

1. SITUATION/BACKGROUND

- 1.1 The purpose of this report is to provide an overview of governance and activity across CTMUHB in relation to the recognition, escalation and early treatment of Sepsis. This report details, themes and cases, analysis of the sepsis 6 bundle and our ongoing approach to improving sepsis recognition and treatment.
- 1.2 Sepsis is one of the leading causes of Acute Deterioration and therefore our response to the acutely deteriorating patient has Sepsis at its core.
- 1.3 The attached report describes the CTMUHB approach to sepsis with Reference to:
- Themes, numbers and aspects of the sepsis bundle that may be missed
 - The picture across the three acute sites
 - Training and governance structures
 - Compliance with the Welsh Government Sepsis Guidelines (2017) and the monthly requirement to provide them with Sepsis Metrics.
 - Future areas for work

1.4 Numbers of deaths across CTM

The table below gives the total numbers of deaths for each site from 2020 onwards where sepsis was listed as a cause of death on the death certificate.

Site	Deaths with sepsis 2020 onwards
PCH	141
POW	137
RGH	110

1.5 Age spread of patients dying with sepsis on the death certificate

The tables below give details of the age ranges of patients at two of the sites for sepsis deaths. Figures for RGH were not available.

We can see from the tables that the vast majority of deaths occurred in the older age groups. We know that classic signs of sepsis may be harder to recognise in these groups.

PCH ages of deaths from sepsis

Age	% of total(deaths)
>90	11.19
80-90	41.04
70-80	32.8
60-70	8.9
<60	5.9

POW deaths from sepsis by age

age	% of total deaths
>90	13.7
80-90	36.27
70-80	25.8
60-70	15.5
<60	8.6

1.6 Sources of sepsis in CTM

The table below shows the most common sources of sepsis listed on death certificates. These are similar across the three sites with all sites seeing chest, intra-abdominal and urosepsis as the leading sources.

Commonest sources per site

Top sources	RGH	POW	PCH
1	uro-sepsis	chest	chest
2	chest	Intra-abdominal	urosepsis
3	Intra-abdominal	urosepsis	Intra-abdominal
4	>1 source	unknown	unknown
5	Soft tissue	biliary	Soft tissue
6	unknown	Soft tissue	biliary

Scale of 1-5 where 1 is most common
Taken from death certificates

1.7 Themes

The deaths related to sepsis in stage 3 mortality reviews and ombudsman cases have been analysed to look for themes across the cases where certain aspects of the care bundle may have been missed. These cases do date from 2019 onwards and may not reflect what is happening now. There has

been a lot of work detailed below into sepsis training and audits taking place that have happened since 2019.

- Acting on NEWS
- Appropriate escalation by nurses and medical staff
- Achieving the full sepsis 6 bundle
- Delays in receiving treatment especially antibiotics and fluids
- Overlooking relevance of subtle signs
- Overlooking relevance of acute kidney injury as part of sepsis
- Documentation especially of specific targets and rationale for withholding treatment if de-escalation is appropriate

1.8 areas where sepsis bundle not completed within 1 hour

Datix reports where sepsis bundle was not completed within an hour were used to see which areas had highest levels of non-compliance.

Location	Bridgend	Merthyr	RTE
Labour ward	5	5	-
ITU	4	5	9
ED	10	18	11
Home	17	7	4
AMU	4	-	-
Admissions	-	4	-
CDU	-	9	-
Fracture clinic	-	1	-
Ward 18	4	-	-
Ward 9	-	4	-
Ward 2	-	-	4

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 ILG sub-RADAR subgroups.

2.1.2 Recognition of the impact and progress made with 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 current use of a Sepsis Screening tool and the Sepsis improvement work plan, Sepsis Working group and proposed sepsis screening tool (appendix 1 of attached position report).
- 2.2.4 Development of the 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 monitor effectiveness of identification, escalation, and response to acute deterioration within CTMUHB. The most recent figures for this are given below for both ED and inpatients, showing 47% and 80% compliance respectively.
- 2.3.2 Standardisation of rapid response emergency call 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 RGH and POW. PCH is currently at 12/7 service which is anticipated to become 24/7 following the induction of newly recruited staff by March 2022.
- 2.3.4 Establishment of CCOT standard operating procedures.
- 2.3.5 Compliance status with Welsh Government Sepsis Guidelines 2017.
- 2.3.6 Training to include subtle signs of sepsis in older patients.

- 2.3.7 Sepsis working group continuing to roll out training in ED at all three sites and audits of this is ongoing. Regular meetings are occurring to monitor this process with representatives from each site.
- 2.3.8 ITU/Labour ward to look at their cases where sepsis 6 was not completed within the first hours. This has been discussed and notes requested for review, reflection and learning points to be shared.
- 2.3.9 Request made to look at admissions with sepsis via coding. This has been done previously for public health Wales and will also real time tracking rather than analysis of death certificates.
- 2.3.10 Focus of the training work is on ED but will be rolled out to cover other areas.
- 2.3.11 Acute kidney injury bundle is next for roll out and an NHS Wales bundle sticker has been produced for ease of use. This is also included in the sepsis 6 audit tool.

3 KEY RISKS/MATTERS FOR ESCALATION TO BOARD/COMMITTEE

3.1 Structural

- 3.1.1 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 accommodation for training in NEWS, Acute Deterioration, Sepsis, Rapid Response, and resuscitation.
- 3.1.4 Ongoing administration support for ILG RADAR meetings.

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. Pressures within ED are still a huge issue in terms of triage and observations being taken in a timely manner when there are staff and space constraints.
- 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.

4 IMPACT ASSESSMENT

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) Not applicable
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 Health

5 RECOMMENDATION

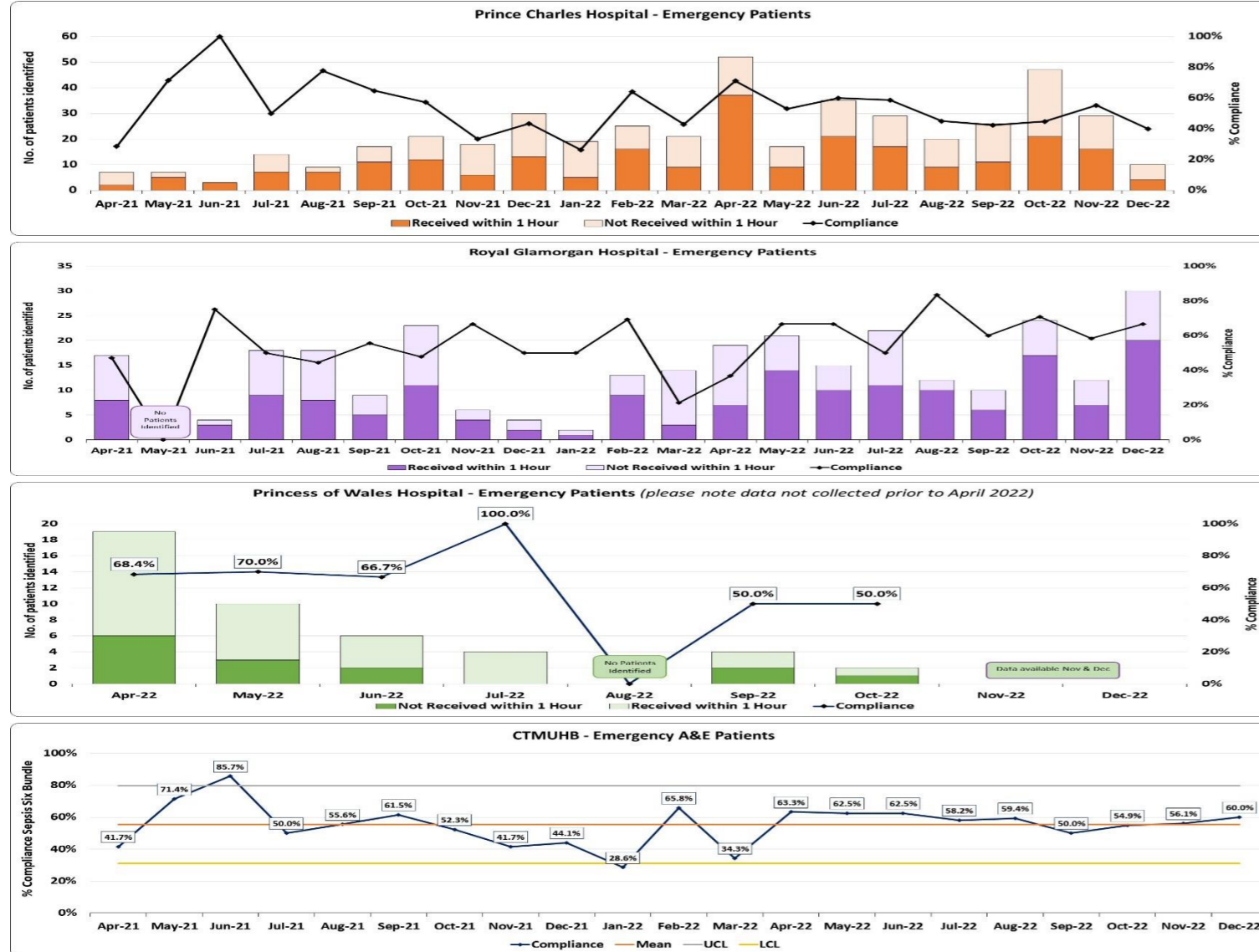
5.1 The Committee is asked to:

- **NOTE** the content of this report.
- Recognise the role of a RADAR Clinical Lead and an Acute Deterioration Lead to give improvement in this area.
- Recognise the essential role that the Critical care outreach teams have in the both the response to acute deterioration and the education of others.

APPENDIX 1 – Sepsis Six Bundle

Emergency A&E Patients

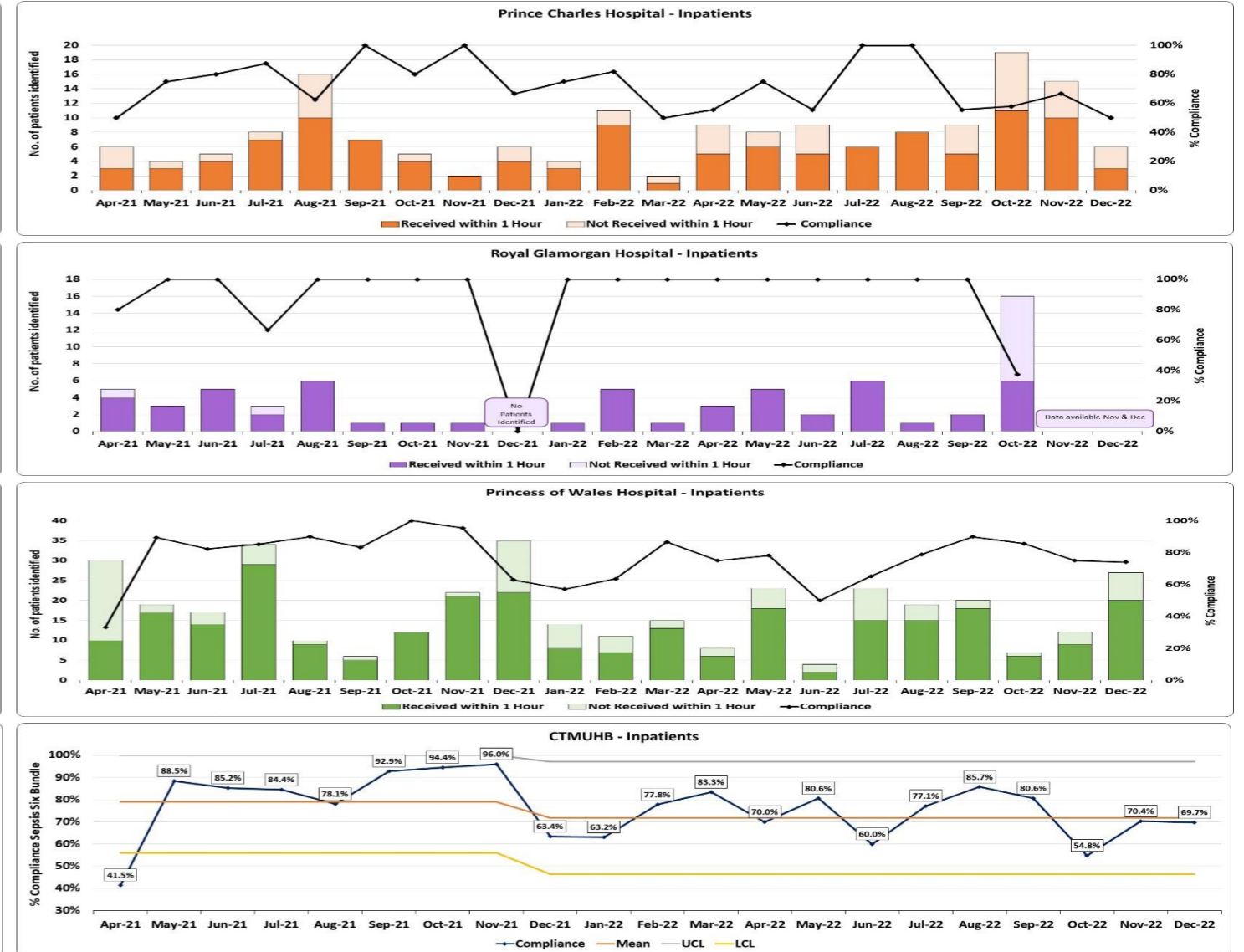
% of Patients with a Positive Screening for Sepsis who have received all 6 Elements of the “Sepsis Six” Bundle within 1 Hour – Emergency A&E - CTMUHB December 2022 – 60.0%



How are we doing & what actions are we taking?

Inpatients

% of Patients with a Positive Screening for Sepsis who have received all 6 Elements of the “Sepsis Six” Bundle within 1 Hour – Inpatients - CTMUHB December 2022 – 69.7%



When is improvement anticipated & what are the risks?

To standardise care within CTM the sepsis screening tool has been revised. This revision risk stratified patients into 'probable sepsis', 'possible sepsis' and 'sepsis unlikely' which is based on current evidence. The aim of risk stratification is to ensure that patients with 'probable sepsis' receive timely treatment of the sepsis 6 interventions within 1 hour. Patients with 'possible sepsis' require time for further investigation with an antibiotic decision being made within 3 hours and patients with 'unlikely sepsis' requiring a search for other diagnosis and re-assessment if their condition changes.

In March 2022* a trial of the revised tool was conducted within our three Emergency Departments (EDs). Following positive feedback the tool was introduced within all wards in RGH/PCH/PoWH in September 2022. ED compliance results are varied across the three sites, however the number of patients identified with either probable or possible sepsis has increased (compliance data is only presented for the sepsis probable patient group) the number of patients identified with probable sepsis within PCH and RGH is between 20-54 per month. Due to a different process of recording data within PoWH numbers are low, however the process has been reviewed and actions agreed to gain more robust sepsis data moving forward. Overall compliance for the 3 ED'S has increased to 60 % in December 22 and there is a more consistent compliance range compared to pre March 2022

The numbers of inpatients identified with probable sepsis has increased since roll out in September 22 there are more forms being completed by ward staff however compliance has dipped in all inpatient sites due to incomplete forms therefore resulting in incomplete data. Inpatient compliance pre Sept 22 is higher due to the reliance on outreach teams completing the sepsis tool.

*(Data pre March 22 represents a different assessment process for sepsis therefore results are not comparable)

The introduction of the new tool and the associated education showed instant improvement in gathering data on cases of sepsis. However compliance has varied across sites due to different factors which are mostly related to the clinical acuity pressures in the EDs and also the presence or absence of Outreach staff.

The new sepsis tool is in use on all PCH, RGH and POW adult ward areas (excluding Mental Health for now). There is ongoing sepsis education for medical and nursing staff. There is monthly reporting of sepsis probable incidence and compliance. The Acute deterioration team are working with WG and Peers in other HBs to standardise our approach across Wales. The Risks to this improvement are:

- Inability to know the true number of patients presenting to ED with Sepsis (to provide a number to which to aspire to treat.)
- Need to emphasise that clinical tools are just part of wider clinical judgement which should be made in a timely fashion by suitably senior clinical decision makers.
- Education and clinical response are often provided by the Outreach teams which, in times of clinical pressures, are pulled back into critical care, thus reducing their inability to respond to cases of sepsis.
- The Acute Deterioration clinical leads who developed and maintain the tool are funded non-recurrently and there is no plan from the care groups to ensure continued funding of sepsis and other work streams from next April.