

# Sepsis Alert - Workflow Fact Sheet

## Overview

eHealth NSW, in close collaboration with the Clinical Excellence Commission and clinicians from Sydney West LHD, has developed a Sepsis Alert to prompt clinicians to consider sepsis for patients at risk for clinical piloting in Blacktown Hospital currently using the Cerner eMR. The Sepsis Alert has been built with a view of integrating with existing clinical workflows for Sepsis Adult Inpatient Pathway after clinical piloting.

The Sepsis Alert includes the Modified St John Sepsis Alert rule, a Sepsis Alert Escalation task and Sepsis Alert Escalation form. Sepsis Alert escalations signed off are visible in the ContinuousDoc viewer. The Sepsis Alert - Workflow is supported by a report to extract data for clinical and performance analysis of the Sepsis Alert.

The Modified St John Sepsis Alert rule has been customised in the eMR from an internationally used St John Sepsis Agent rule. It identifies patients at risk of SIRS and Severe Sepsis based on vital signs and pathology criteria.

Constantly running in the background, the rule is activated on routine entry of the following observations, bedside test and pathology results for SIRS and Organ Dysfunction criteria into the system:

### SIRS Criteria

- Respiratory Rate
- Heart Rate
- Temperature
- Blood Glucose Level
- White Blood Cell Count and Bands

### Organ Dysfunction Criteria

- Systolic Blood Pressure
- Mean Arterial Pressure
- Lactate
- Bilirubin
- Creatinine increase from baseline

The Sepsis Alert Escalation task is displayed in the interactive nursing patient list view page (CareCompass) on results entry and/or pathology results arrival, resulting from matching combinations of the criteria results in range from above. The task is produced when clinical criteria for SIRS or severe sepsis are met.

	22/07/2015		
	13:51	13:50	11:45
<b>Standard Observations</b>			
BTF Vital Signs			
Respiratory Rate	brpm		22
Respiratory Distress			
Oxygen Saturation	%		
Oxygen Delivery			
Oxygen Flow Rate	L/min		
FIO2	%		
Peripheral Pulse Rate	bpm		110
Peripheral Pulse Rate Regularity			
Apical Heart Rate	bpm		
Apical Heart Rate Regularity			
BP Cuff	mmHg	89/55 !	
BP Cuff Type			
Mean Arterial Pressure Cuff Calc			
Mean Arterial Pressure Cuff	mmHg		
BP Invasive	mmHg		
Mean Arterial Pressure Invasive Calc			
Mean Arterial Pressure Invasive	mmHg		
Temperature Tympanic	DegC		39 ↑
Temperature Axilla	DegC		
Temperature Oral	DegC		
Blood Glucose Level Bedside	mmol/L		

Screen 1. Observations Entry

# Sepsis Alert - Workflow Fact Sheet

The task displays as immediately overdue in the list of tasks for nurses against the patient. After escalating the alert as clinically required, nurses can launch and document Sepsis Alert escalation outcome from the nursing patient list view:

The screenshot shows a patient list on the left with the following entries:

Location	Patient
201 - 1	<b>EMRU, Prem</b> 18m   Male   -- No Allergies R...   Diet Nil by Mouth
201 - 2	<b>EMRT, Robert</b> 33yrs   Male   No CPR No Known Allergies   NBM for > 12 hours
201 - 3	<b>EMRU, John</b> 73yrs   Male   -- Allergies   --
201 - 4	<b>EMRU, Vincent</b> 34yrs   Male   -- No Known Allergies   Diet Full Fluids
201 - 5	<b>EMRU, Kate</b> 68yrs   Female   Resus Plan Documented Allergies   --
202 - 2	<b>EMRU, Shaun</b> 19yrs   Male   Resus Plan Documented Allergies   --
203 - 1	<b>EMRU, Thomas</b> 32yrs   Male   -- No Allergies Recorded   --
203 - 2	<b>EMRU, Beryl</b> 85yrs   Female   --

The task detail view for 'EMRU, Kate' shows the following tasks:

- Complete Baseline Vital Signs**
- Height and Weight**
- Adult Admission Assessment**
- Confusion Assessment Method (CAM)** Confusion Assessment Method (CAM)\_Modified 20/07/2015 09:09, 1, Complete a CAM  
Instruction: Complete a CAM
- Sepsis Alert Escalation 20/07/2015 09:15, 1** (highlighted)
- Oxygen Therapy** 07/06/15 9:00:00 AEST L/min: 10 FIO2: 25 Ventri Face Mask 24 hr, maintain 88-92% SpO2, 07/06/15 9:00:00 AEST  
Instruction: maintain 88-92% SpO2
- Communication Plan for Dementia** Communication plan for dementia 20/07/2015 09:09, 1, Complete a Communication Plan for dementia...  
Instruction: Complete a Communication Plan for dementia with family/carer

At the bottom right of the task detail view, there are buttons for 'Done', 'Not Done', and 'Document'.

Screen 2. Sepsis Alert Escalation task

**Sepsis Alert Escalation**

**Zebra Blue** MRN: 625 DOB: 04/04/1970 AGE: 44 Years MC: 9999999999  
91 Pacific Hwy HORNSBY NSW 2077 SEX: M LOC: 1N; 106; 1

**Have you escalated the Sepsis Alert to the Medical Team?**  
 Yes  No

**Escalated to:** Davis, Paul Snr MO

**Date/Time escalated:** 20/07/2015 09:15

**To request:**  
 Rapid response  
 Clinical review

**Reason for not escalating:**

**If consulted with Team Leader, record the name of the Team Leader**

**Summary of Alert Information** (Displays Alert Type, Alert Time, and Alert Criteria for the most recently charted Alert)  
 Type of Alert: Severe Sepsis  
 Time of Alert: 20/02/2015 08:05:28  
 Criteria Met: 20/02/15 08:04:00 Peripheral Pulse Rate = 95 bpm (H) [greater than or equal to 95] 20/02/15 08:04:00 Temperature Tympanic = 38.5 C (H) [greater than or equal to 38.5] 20/02/15 08:04:00 Respiratory Rate = 23 bpm (H) [greater than or equal to 22] 20/02/15 08:05:00 Systolic Blood Pressure = 65 mmHg (L) [less than 90]

Screen 3. Sepsis Alert Escalation Form

# Sepsis Alert - Workflow Fact Sheet

Implementation planning of Sepsis Alert - Workflow has commenced with pilot site implementation in March 2015.

## High Level Requirements

The design was developed to meet following baseline requirements as identified by Clinical Excellence Commission and clinicians:

1. The Sepsis Alert displays in the nursing view triggered on vital signs and pathology results entered into the system in real-time for patients over 18 years.
2. Clinicians can document the Alert escalation action and its details.
3. Clinicians can view the Alert escalation action and details as part of the patient record.
4. Clinicians can obtain the data for the pilot project results analysis.