Policy for Vital Signs:
Early Warning System for the Detection and Care of the Deteriorating patient.

Cardiac arrests
Collapsed unconscious patient –
Call for help
Pull your alarm
To call an ambulance (all areas except City and Hackney Centre for Mental Health)
Dial 9-999
City and Hackney Centre for Mental Healthy always dial 2222 and state your location.
<table>
<thead>
<tr>
<th>Version Date</th>
<th>New Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Originator /Author(s)</td>
<td>Physical Health Lead Nurse</td>
</tr>
<tr>
<td>Ratified by</td>
<td>Lead Nurse Group</td>
</tr>
<tr>
<td></td>
<td>Nurse development Steering Group</td>
</tr>
<tr>
<td></td>
<td>Clinical effectiveness Group</td>
</tr>
<tr>
<td>Name of responsible committee</td>
<td>Clinical Effectiveness Group</td>
</tr>
<tr>
<td>Version</td>
<td>1.1</td>
</tr>
<tr>
<td>Implementation/approval Date</td>
<td>September 2012</td>
</tr>
<tr>
<td>Review Date</td>
<td>September 2015 or where guidance changes</td>
</tr>
<tr>
<td>Review Body</td>
<td>Clinical effectiveness Group</td>
</tr>
<tr>
<td>Target audience</td>
<td>All staff on inpatient wards in mental health and community</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Status</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Policy</td>
<td>July 2012</td>
<td>Lead Nurse Physical Health</td>
<td>Final</td>
<td>Policy to support staff with implementing Early warning signs</td>
</tr>
</tbody>
</table>
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<td>5 Policy</td>
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<td>5.2 Observations recorded in the green section of the chart</td>
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1. **Summary**

This policy details the East London NHS Foundation Trust (ELFT) standards for monitoring and documenting physiological observations, for adult inpatients. It sets out the roles of ward based and clinical response teams, according to a graded response system, triggered by the patient’s observations.

This policy and the observation standard within it, applies to all adults being treated in all inpatient wards in East London NHS Foundation Trust. The graded response system applies to patients in inpatient ward areas.

The policy does not apply to patients receiving treatment in community teams in mental health or Community Health Newham or patients nearing the end of their life, and patients being cared for on the Liverpool Care Pathway.

Patients with a do not resuscitate order are not exempt from the standards within this policy, unless this has been documented in the patient’s health care record. Community and District nursing teams will be covered in an addended protocol to be released 2013.

Management of patients in their own homes require additional reviews and may not just be based on this early warning system. The Trust are developing a community specific scoring system for assessing patients at home by district nurses this will be available in April 2013. Meanwhile the physiological parameters recorded in this policy apply to all patients unless otherwise recorded.

2. **Introduction**

The clinical safety of patients is the absolute priority in the delivery of patient care at ELFT. Key to this is the early recognition and response to unwell and or deteriorating patients.

The purpose of this policy is to ensure that patients at risk of deterioration are assessed and referred to the most appropriate person, to ensure treatment is provided in a timely manner. It sets out the Trusts minimum standards for monitoring and recording physiological observations, and the competencies of the staff involved.

The policy outlines the referral pathway for patients whose physiological condition triggers the Trust graded response system; this is the Trusts early warning system.

It aims to ensure that the Trust is compliant with NICE safety directives and NHSLA national accreditation standards. It should be read in conjunction with the following Trust policies and protocols, which are available on the Trust intranet:

- Resuscitation Policy
- Physical Health Policy

3. **Scope**

This policy applies to all those working in the Trust, in whatever capacity. A failure to follow the requirements of the policy may result in investigation and management action being taken as considered appropriate. This may include formal action in line with the Trust's disciplinary or capability procedures for Trust employees; and other action in relation to other workers, which may result in the termination of an assignment, placement, secondment or honorary arrangement.
4. Roles and Responsibilities

4.1 Executive responsible for Patient Safety: Medical Director and Director of Nursing

The Director of Nursing and Medical Director are responsible for ensuring that safe systems of work are in place to protect patients whilst they are being cared for in the Trust; that deterioration in patients is detected quickly and their care is escalated in a timely way.

4.2 Ward/Department Managers responsibilities

- To ensure staff have read and understood this policy.
- To ensure staff are using the Trust observation chart (the colour coded chart) at all times. See Appendix 3
- To ensure staff are adequately trained and supervised in aspects of care that are delegated.
- To be the first point of contact for staff to escalate the care of a patient
- To review the patient and take appropriate action according to the guidance on the observation chart and appropriate clinical decisions.
- To ensure Nursing assistants have been competency assessed following essential skill training.

4.3 Registered Nurses responsibilities

- To monitor adult patients in accordance with this policy and the guidance on the observation chart.
- To use the colour coded chart at all times.
- To ensure when delegating to members of the healthcare team not regulated by a professional body, that those members of staff are adequately trained and supervised to carry out that care.
- To remain responsible and accountable for any patients care (including observations and the detection of deterioration) that is delegated to non qualified staff.
- To review all observations taken by delegated staff.
- To be the first point of contact for staff to escalate the care of a patient.

4.4 Nursing Assistants / Social Therapists responsibilities

- To care for the patient as directed by the registered nurse.
- To document all observations on the colour coded chart.
• To alert a registered nurse immediately if there is any change to the patients observations – particularly if this change goes into the yellow or red zone of the chart.

5. Policy

5.1 Observations

All patients must have an initial set of observations measured by a registered nurse and the frequency of subsequent sets of observations determined; when they arrive in the Trust (as an inpatient) and when patients are moved from one clinical area to the other. Subsequent sets of observations maybe recorded by other members of the care team who have been trained and assessed as competent.

The frequency for monitoring physiological observations should be increased in response to abnormalities, or physiological changes to treatment by a registered nurse or ward doctor, as required (see below).

The frequency with which the patient’s observations are required should be documented on the observation chart in the “observations prescription” section, by a registered nurse or doctor.

The Trust standard physiological observation set is as follows;

- Respiratory rate
- Oxygen saturations
- Heart rate (peripheral pulse)
- Blood pressure
- Temperature

These clinical markers must be used to identify any deterioration in the patient using the colour coded sections of the chart and the parameters at the base of the chart, with every set of observations. All observations MUST be documented on the colour coded chart (Appendix 1).

The Trust’s minimum standard is that all patients must have a full set of physiological observations monitored and recorded every week and recorded on the colour coded chart and on RIO where applicable.

The only exception to observations being required at least every week will be patients being cared for in longer term care and rehabilitation and continuing care areas where less frequent observations may be entirely appropriate. This must be assessed by a Registered Nurse and reflected in the patient’s care plan and on the observation chart.

Patients may also be prescribed more frequent observations daily or four times daily and this must be reflected in the care plan and physical observation chart.

5.2 Observations recorded in the green section of the observation chart

These patients should continue to have observations carried out at a frequency defined by a registered nurse or at a minimum every week
5.3 Observations in the yellow section of the observation chart

If the observations have been taken by a Nursing Assistant/Student they must:

- Re check the observations
- Inform a Registered Nurse

The Registered Nurse must:

- Inform the service user /patient of the need for frequent observations and the rationale for treatment- unless unconscious
- Re-check the patients observations
- Check the patients
  a. Airway
  b. Breathing
  c. Circulation
  d. Disability (conscious level)
  e. Examination (physical)
- See what action can be taken to improve the patient’s condition; positioning, administering prescribed medication, oxygen.
- Increase the frequency of observations
- Consider who should carry out further observations (registered or non registered staff)
- Review the patient AT LEAST every four hours.
- Inform the nurse in charge.
- Inform the patient’s medical team

5.4 Observations in the red section of the observation chart

If the observations have been taken by a Nursing Assistant/ Student they must:

- Ask a registered Nurse to assess the patient immediately

The registered Nurse/ must:

If the patient is- if any of the following are present:
HR above 120 or below 50
Patient is unresponsive to voice and painful stimuli,
BP below 80 or un-recordable,
RR over 40 ( peri arrest,) call the cardiac arrest team (rapid response team and ambulance) or ambulance in sites where there is no response team and start basic life support.

- Re check the observations and carry out an A-E assessment as above. At the same time, call for assistance from senior members of the team including the nurse in charge.
- Increase the frequency of observations to at least 15 minutes until stable and reviewed by a doctor or ambulance service and ensure the patient is within line of sight of a registered nurse at all times.In continuing care wards staff should follow the plan locally agreed which may involve liason with community matron)
- Inform the patients medical team of the deterioration immediately

5.5 Monitoring Trends

The importance of monitoring trends in observations cannot be overstated, due to the fact that;
• Patients including those with chronic illness may have observation markers outside of normal parameters.
• Where physiological observations are outside the “normal” range they must be investigated and an alternate level of risk recorded on the chart and in the care plan.
• Early recognition of abnormalities and subtle changes may provide an early indication of deterioration.

5.6 **Parameters on the observation chart**

Some parameters are normal for some people and should only be a ‘trigger’ if happening for the first time/ or persistently.

As well as the colour coding on the chart the following parameters in relation to observations should trigger a call to the ward doctor / most senior nurse

Unless alternate parameters are clearly defined and recorded for an individual patient / client

<table>
<thead>
<tr>
<th>Physiological Observation</th>
<th>Less Than</th>
<th>Greater Than</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Rate</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>Oxygen Saturation</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Heart Rate</td>
<td>50</td>
<td>120</td>
</tr>
<tr>
<td>Systolic Blood Pressure</td>
<td>80mmHg</td>
<td>200mmHg</td>
</tr>
<tr>
<td>Core Temperature</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Urine Output if the patient is catheterized</td>
<td>30mls/hr</td>
<td>200mls/hr</td>
</tr>
</tbody>
</table>

6. **Fluid Balance**

As a guide, fluid balance status should be monitored and recorded on patients who present with signs and symptoms of;

a. Peri – arrest state
b. Refusing food / Fluid
c. Dehydration/ restricted fluid intake
d. Vomiting and/or diarrhoea
e. Known or suspected renal impairment

Fluid balance monitoring requires documentation of the amount of fluid taken in orally/ subcutaneously/ intravenously as well as the volume of fluid excreted, on the fluid balance chart. It is accepted that measurement in mental health is
difficult. Therefore record trips to the toilet, ask the service user whether he has passed urine.

Clients on a fluid balance chart should have their Fluid balance calculated at least once every 24 hours and any negative or positive balance reported to the nurse in charge in the first instance, as well as electronically.

7. **Equipment**

The Trust is responsible for ensuring that the correct and sufficient equipment is available for the measurement of vital signs.

The ward manager is accountable for ensuring the equipment in their area is maintained, in good working order and sent to Medical Electronics for regular servicing usually yearly twice yearly for defibrillators and if any defect is suspected.

The Medical Electronics department is responsible for ensuring equipment is maintained and in a condition fit for purpose.

All staff must be competent in the use of equipment for monitoring and measuring vital signs.

All staff must have competence in recognising abnormalities in observations.

8. **Clinical Incidents**

Any non compliance with this policy that results in or could have resulted in harm to a patient should be reported as a clinical incident using the Trust incident reporting process.

Deteriorating physical health that requires transfer to acute hospital should be recorded as a clinical incident.

9. **Training and awareness**

Education is provided at Ward level by the Physical Health Lead Nurse or Matron where required.

Nursing & Nursing Assistants will receive training as part of the one day physical health course/ as part of their induction/ and/ or when new equipment or processes are introduced.

Nursing / Nursing Assistants are competency assessed at ward Level by Registered Nurses.

10. **Review**

This policy will be reviewed in 3 years time. Earlier review may be required in response to exceptional circumstances, organisational change or relevant changes in legislation or guidance.
11. Monitoring/Audit

<table>
<thead>
<tr>
<th>Measurable protocol objective</th>
<th>Monitoring/audit method</th>
<th>Frequency of monitoring</th>
<th>Responsibility for performing monitoring</th>
<th>Monitoring reported to which groups/committees, inc responsibility for reviewing action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust observation standards will be audited biannually in May September</td>
<td>Clinical audit</td>
<td>Annual</td>
<td>Lead Nurse Physical Health</td>
<td>Quality Committee</td>
</tr>
<tr>
<td>Cardiac arrest rates Cardiac arrest outcome data</td>
<td>Report from Datix database</td>
<td>Annual</td>
<td>Lead Nurse for Physical Health</td>
<td>Quality Committee</td>
</tr>
</tbody>
</table>
### NHSLA Policy Monitoring

<table>
<thead>
<tr>
<th>NHSLA Standard</th>
<th>Name</th>
<th>Element to be monitored</th>
<th>Lead</th>
<th>Tool</th>
<th>Frequency</th>
<th>Reporting Arrangements</th>
<th>Actions on recommendations and leads</th>
<th>Change in practice and lessons to be shared</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.8</td>
<td>The Deteriorating Patient</td>
<td>Requirement for a documented plan for vital signs monitoring that identifies which variables need to be measured, including the frequency of measurement</td>
<td>Infection Control and Physical Health Lead Nurse</td>
<td>Health care records audit</td>
<td>Annual</td>
<td>The Assistant Director of Nursing receives the audit reports</td>
<td>The Assistant Director of Nursing will formulate action points and timescales for each Directorate where there is evidence of non-compliance within two weeks of the audit</td>
<td>The Clinical Effectiveness Group will receive and discuss the report and monitor the action plan within six weeks of the audit</td>
</tr>
</tbody>
</table>

**Policy for Vital Signs: Early Warning System for the Detection and Care of the Deteriorating Patient**

- Use of an early warning system within the organisation to recognise patients at risk of deterioration
12. Sources of Evidence; References / Bibliography

Acutely ill patients in hospital, NICE guidance CG50 (July 2007)

Acute medical care, the right person in the right setting – first time
Royal College of Physicians (October 2007).

Recognising & responding appropriately to early signs of deterioration in
hospitalised patients. National Patient Safety Agency (November 2007)

Emergency admissions: a journey in the right direction. A report of the National
Confidential Enquiry into Patient Outcome & Death (October 2007)

Acutely Unwell Patients Protocol Guys and St Thomas' NHS Trust (June 2010)

Rapid Response Report NPSA/RRR/016 Laparoscopic Surgery: Failure to
recognise post operative deterioration. National Patients Safety Agency (Sept 2010)
All patients will have their baseline observations measured by a registered nurse or doctor within 24 hours of admission and their subsequent frequency clearly recorded. Subsequent observations may be recorded by other members of the care team who have been trained and assessed as competent.

The green area denotes readings within the NORMAL or accepted range.

If any one of the vital signs are in the orange area inform nurse in charge and repeat the observation within 30 minutes and compare with the patients previous observations as well as the condition of the patient.

If any two of the vital signs are in the amber or saturations fall below 90%:
- Recheck the observations and confirm the measurements.
- Inform the Nurse in charge.

Nurse in charge should:
- Recheck Vital Signs; Are these within patients Normal Limits?
- Check the patient?
- Do you need to increase the frequency of observations?
- Do you need help managing the patient?
- Call the duty doctor.

If patients Heart rate > 90. Respiratory rate > 20. Temperature > 38.3.
- Check the blood glucose
- bleep the Doctor responsible for the patient or the lead nurse in EHCC State that you have identified a patient at risk.

Two observations are within the red zone
Recheck the observations immediately.

This should NOT delay calling the Medical Emergency Team.

Monitor Observations continuously and ensure the suction and crash trolley are available.

Check the blood sugar. Inform the Duty Doctor of the patients deteriorating condition.

To call The Team dial 2222 stating you have a medical emergency.

<table>
<thead>
<tr>
<th>BP Systolic</th>
<th>BP Diastolic</th>
<th>Pulse</th>
<th>Peak Flow</th>
<th>O2 Sats</th>
<th>Respiration</th>
<th>Temperature</th>
<th>Respiration</th>
</tr>
</thead>
<tbody>
<tr>
<td>140 mg</td>
<td>90 mg</td>
<td>60</td>
<td>400</td>
<td>95 %</td>
<td>12</td>
<td>36 oC</td>
<td>7 mmols</td>
</tr>
<tr>
<td>100 mg</td>
<td>60 mg</td>
<td>80</td>
<td>650 litres min</td>
<td></td>
<td>15</td>
<td>37.2 oC</td>
<td>100 %</td>
</tr>
<tr>
<td>100 mg</td>
<td>80 mg</td>
<td>30</td>
<td>95 %</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>80 mg</td>
<td>60 mg</td>
<td>15</td>
<td>95 %</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>60 mg</td>
<td>40 mg</td>
<td>10</td>
<td>95 %</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40 mg</td>
<td>20 mg</td>
<td>5</td>
<td>95 %</td>
<td></td>
<td>15</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Normal Physical Observations
Where physical observations outside of normal ranges are investigated and found to be “normal” for the patient, a new baseline should be set with clearly recorded abnormal indicators of deterioration set.

For example:

Pulse 88 to 96 follow orange parameters if pulse greater than 100
Follow red parameters if pulse greater than 110
Appendix D: Implementation Plan Template

<table>
<thead>
<tr>
<th>Objective</th>
<th>Action</th>
<th>Lead</th>
<th>Timescale</th>
<th>Progress/Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The procedure is properly disseminated throughout the Trust.</td>
<td>Via lead nurses and matrons</td>
<td>CS</td>
<td>December 2013</td>
<td></td>
</tr>
<tr>
<td>2. Appropriate training is provided to staff.</td>
<td>On site training Included in Physical health course</td>
<td>CS</td>
<td>Ongoing</td>
<td></td>
</tr>
</tbody>
</table>