

## Root Cause Analysis Investigation tools

### Contributory Factors Classification Framework

Patient Factors	Components
Clinical condition	<ul style="list-style-type: none"> <li><input type="checkbox"/> Pre-existing co-morbidity</li> <li><input type="checkbox"/> Complexity of condition</li> <li><input type="checkbox"/> Seriousness of condition</li> <li><input type="checkbox"/> Limited options available to treat condition</li> <li><input type="checkbox"/> Disability</li> </ul>
Physical Factors	<ul style="list-style-type: none"> <li><input type="checkbox"/> Poor general physical state</li> <li><input type="checkbox"/> Malnourished</li> <li><input type="checkbox"/> Dehydrated</li> <li><input type="checkbox"/> Age related issues</li> <li><input type="checkbox"/> Obese</li> <li><input type="checkbox"/> Poor sleep pattern</li> </ul>
Social Factors	<ul style="list-style-type: none"> <li><input type="checkbox"/> Cultural / religious beliefs</li> <li><input type="checkbox"/> Language</li> <li><input type="checkbox"/> Lifestyle (smoking/ drinking/ drugs/diet)</li> <li><input type="checkbox"/> Sub-standard living accommodation (e.g. dilapidated)</li> <li><input type="checkbox"/> Life events</li> <li><input type="checkbox"/> Lack of support networks / (social protective factors -Mental Health Services)</li> <li><input type="checkbox"/> Engaging in high risk activity</li> </ul>
Mental/ Psychological Factors	<ul style="list-style-type: none"> <li><input type="checkbox"/> Motivation issue</li> <li><input type="checkbox"/> Stress / Trauma</li> <li><input type="checkbox"/> Existing mental health disorder</li> <li><input type="checkbox"/> Lack of intent (Mental Health Services)</li> <li><input type="checkbox"/> Lack of mental capacity</li> <li><input type="checkbox"/> Learning Disability</li> </ul>
Interpersonal relationships	<ul style="list-style-type: none"> <li><input type="checkbox"/> Staff to patient and patient to staff</li> <li><input type="checkbox"/> Patient engagement with services</li> <li><input type="checkbox"/> Staff to family and family to staff</li> <li><input type="checkbox"/> Patient to patient</li> <li><input type="checkbox"/> Family to patient or patient to family</li> <li><input type="checkbox"/> Family to family (Siblings, parents, children)</li> </ul>

Staff Factors	Components
Physical issues	<ul style="list-style-type: none"> <li><input type="checkbox"/> Poor general health (e.g. nutrition, hydration, diet, exercise, fitness)</li> <li><input type="checkbox"/> Disability (e.g. eyesight problems, dyslexia)</li> <li><input type="checkbox"/> Fatigue</li> <li><input type="checkbox"/> Infected Healthcare worker</li> </ul>
Psychological Issues	<ul style="list-style-type: none"> <li><input type="checkbox"/> Stress (e.g. distraction / preoccupation)</li> <li><input type="checkbox"/> Specific mental illness (e.g. depression)</li> <li><input type="checkbox"/> Mental impairment (e.g. illness, drugs, alcohol, pain)</li> <li><input type="checkbox"/> Lack of motivation (e.g. boredom, complacency, low job satisfaction)</li> </ul>
Social Domestic	<ul style="list-style-type: none"> <li><input type="checkbox"/> Domestic problems (e.g. family related issues)</li> <li><input type="checkbox"/> Lifestyle problems (e.g. financial/housing issues)</li> <li><input type="checkbox"/> Cultural beliefs</li> <li><input type="checkbox"/> Language</li> </ul>
Personality Issues	<ul style="list-style-type: none"> <li><input type="checkbox"/> Low self confidence / over confidence (e.g. Gregarious, reclusive, interactive)</li> <li><input type="checkbox"/> Risk averse / risk taker</li> <li><input type="checkbox"/> Bogus Healthcare worker</li> </ul>
Cognitive factors	<ul style="list-style-type: none"> <li><input type="checkbox"/> Preoccupation / narrowed focus (Situational awareness problems)</li> <li><input type="checkbox"/> Perception/viewpoint affected by info. or mindset (Expectation/Confirmation bias)</li> <li><input type="checkbox"/> Inadequate decision/action caused by Group influence</li> <li><input type="checkbox"/> Distraction / Attention deficit</li> <li><input type="checkbox"/> Overload</li> <li><input type="checkbox"/> Boredom</li> </ul>

<b>Task Factors</b>	<b>Components</b>
Guidelines, Policies and Procedures	<ul style="list-style-type: none"> <li><input type="checkbox"/> Not up-to-date</li> <li><input type="checkbox"/> Unavailable at appropriate location (e.g. Lost/missing/non-existent/not accessible when needed)</li> <li><input type="checkbox"/> Unclear/not useable (Ambiguous; complex; irrelevant, incorrect)</li> <li><input type="checkbox"/> Not adhered to / not followed</li> <li><input type="checkbox"/> Not monitored / reviewed</li> <li><input type="checkbox"/> Inappropriately targeted/focused (i.e. not aimed at right audience)</li> <li><input type="checkbox"/> Inadequate task disaster plans and drills</li> </ul>
Decision making aids	<ul style="list-style-type: none"> <li><input type="checkbox"/> Aids not available (e.g. CTG machine; checklist; risk assessment tool; fax machine to enable remote assessment of results)</li> <li><input type="checkbox"/> Aids not working (e.g. CTG machine, risk assessment tool, fax machine)</li> <li><input type="checkbox"/> Difficulties in accessing senior / specialist advice</li> <li><input type="checkbox"/> Lack of easy access to technical information, flow charts and diagrams</li> <li><input type="checkbox"/> Lack of prioritisation of guidelines</li> <li><input type="checkbox"/> Incomplete information (test results, patient history)</li> </ul>
Procedural or Task Design	<ul style="list-style-type: none"> <li><input type="checkbox"/> Poorly designed (i.e. Too complex; too much info.; difficult to conceive or remember)</li> <li><input type="checkbox"/> Guidelines do not enable one to carry out the task in a timely manner</li> <li><input type="checkbox"/> Too many tasks to perform at the same time</li> <li><input type="checkbox"/> Contradicting tasks</li> <li><input type="checkbox"/> Staff do not agree with the 'task/procedure design'</li> <li><input type="checkbox"/> Stages of the task not designed so that each step can realistically be carried out</li> <li><input type="checkbox"/> Lack of direct or understandable feedback from the task</li> <li><input type="checkbox"/> Misrepresentation of information</li> <li><input type="checkbox"/> Inappropriate transfer of processes from other situations</li> <li><input type="checkbox"/> Inadequate Audit, Quality control, Quality Assurance built into the task design</li> <li><input type="checkbox"/> Insufficient opportunity to influence task/outcome where necessary</li> <li><input type="checkbox"/> Appropriate automation not available</li> </ul>

<b>Communication</b>	<b>Components</b>
Verbal communication	<ul style="list-style-type: none"> <li><input type="checkbox"/> Inappropriate tone of voice and style of delivery for situation</li> <li><input type="checkbox"/> Ambiguous verbal commands / directions</li> <li><input type="checkbox"/> Incorrect use of language</li> <li><input type="checkbox"/> Made to inappropriate person(s)</li> <li><input type="checkbox"/> Incorrect communication channels used</li> </ul>
Written communication	<ul style="list-style-type: none"> <li><input type="checkbox"/> Inadequate patient identification</li> <li><input type="checkbox"/> Records difficult to read</li> <li><input type="checkbox"/> All relevant records not stored together and accessible when required</li> <li><input type="checkbox"/> Records incomplete or not contemporaneous (e.g. unavailability of patient management plans, patient risk assessments, etc)</li> <li><input type="checkbox"/> Written information not circulated to all team members</li> <li><input type="checkbox"/> Communication not received</li> <li><input type="checkbox"/> Communications directed to the wrong people</li> <li><input type="checkbox"/> Lack of information to patients</li> <li><input type="checkbox"/> Lack of effective communication to staff of risks (Alerts systems etc)</li> </ul>
Non verbal communication	<ul style="list-style-type: none"> <li><input type="checkbox"/> Body Language issues (closed, open, body movement, gestures, facial expression)</li> </ul>
Communication Management	<ul style="list-style-type: none"> <li><input type="checkbox"/> Communication strategy and policy not defined / documented</li> <li><input type="checkbox"/> Ineffective involvement of patient/carer in treatment and decisions</li> <li><input type="checkbox"/> Lack of effective communication to patients/relatives/carers of risks</li> <li><input type="checkbox"/> Lack of effective communication to patients about incidents (being open)</li> <li><input type="checkbox"/> Information from patient/carer disregarded</li> <li><input type="checkbox"/> Ineffective communication flow to staff up, down and across</li> <li><input type="checkbox"/> Ineffective interface for communicating with other agencies (partnership working)</li> <li><input type="checkbox"/> Lack of measures for monitoring communication</li> </ul>

Equipment	Components
Displays	<input type="checkbox"/> Incorrect information / feedback available <input type="checkbox"/> Inconsistent or unclear information <input type="checkbox"/> Illegible information <input type="checkbox"/> Interference/unclear equipment display
Integrity	<input type="checkbox"/> Poor working order <input type="checkbox"/> Inappropriate size <input type="checkbox"/> Unreliable <input type="checkbox"/> Ineffective safety features / not designed to fail safe <input type="checkbox"/> Poor maintenance programme <input type="checkbox"/> Failure of general services (power supply, water, piped gases etc)
Positioning	<input type="checkbox"/> Correct equipment not available <input type="checkbox"/> Insufficient equipment / emergency backup equipment <input type="checkbox"/> Incorrectly placed for use <input type="checkbox"/> Incorrectly stored
Usability	<input type="checkbox"/> Unclear controls <input type="checkbox"/> Not intuitive in design <input type="checkbox"/> Confusing use of colour or symbols <input type="checkbox"/> Lack of or poor quality user manual <input type="checkbox"/> Not designed to make detection of problems obvious <input type="checkbox"/> Use of items which have similar names or packaging <input type="checkbox"/> Problems of compatibility

Work Environment	Components
Administrative factors	<input type="checkbox"/> Unreliable or ineffective general administrative systems (Please specify e.g.: Bookings, Patient identification, ordering, requests, referrals, appointments) <input type="checkbox"/> Unreliable or ineffective admin infrastructure (e.g. Phones, bleep systems etc) <input type="checkbox"/> Unreliable or ineffective administrative support
Design of physical environment	<input type="checkbox"/> Poor or inappropriate office design (computer chairs, height of tables, anti-glare screens, security screens, panic buttons, placing of filing cabinets, storage facilities, etc.) <input type="checkbox"/> Poor or inappropriate area design (length, shape, visibility, provision of space) <input type="checkbox"/> Inadequate security provision <input type="checkbox"/> Lack of secure outside space <input type="checkbox"/> Inadequate lines of sight <input type="checkbox"/> Inadequate/inappropriate use of colour contrast/patterns (walls/doors/flooring etc)
Environment	<input type="checkbox"/> Facility not available (failure or lack of capacity) <input type="checkbox"/> Fixture or fitting not available (failure or lack of capacity) <input type="checkbox"/> Single sex accommodation limitation/breach <input type="checkbox"/> Ligature/anchor points <input type="checkbox"/> Housekeeping issues – lack of cleanliness <input type="checkbox"/> Temperature too high/low <input type="checkbox"/> Lighting too dim or bright, or lack of <input type="checkbox"/> Noise levels too high or low <input type="checkbox"/> Distractions
Staffing	<input type="checkbox"/> Inappropriate skill mix (e.g. Lack of senior staff; Trained staff; Approp. trained staff) <input type="checkbox"/> Low staff to patient ratio <input type="checkbox"/> No / inaccurate workload / dependency assessment <input type="checkbox"/> Use of temporary staff <input type="checkbox"/> High staff turnover
Work load and hours of work	<input type="checkbox"/> Shift related fatigue <input type="checkbox"/> Excessive working hours <input type="checkbox"/> Lack of breaks during work hours <input type="checkbox"/> Excessive of extraneous tasks <input type="checkbox"/> Lack of social relaxation, rest and recuperation
Time	<input type="checkbox"/> Delays caused by system failure or design <input type="checkbox"/> Time pressure

<b>Organisational</b>	<b>Components</b>
Organisational structure	<input type="checkbox"/> Hierarchical structure/Governance structure not conducive to discussion, problem sharing, etc. <input type="checkbox"/> Tight boundaries for accountability and responsibility <input type="checkbox"/> Professional isolation <input type="checkbox"/> Clinical versus the managerial model <input type="checkbox"/> Inadequate maintenance <input type="checkbox"/> Lack of robust Service level agreements/contractual arrangements <input type="checkbox"/> Inadequate safety terms and conditions of contracts
Priorities	<input type="checkbox"/> Not safety driven <input type="checkbox"/> External assessment driven e.g. Annual Health checks <input type="checkbox"/> Financial balance focused
Externally imported risks	<input type="checkbox"/> Unexpected adverse impact of national policy/guidance (from Department of Health / Health authorities /Professional colleges) <input type="checkbox"/> Locum / Agency policy and usage <input type="checkbox"/> Contractors related problem <input type="checkbox"/> Equipment loan related problem <input type="checkbox"/> Lack of service provision <input type="checkbox"/> Bed Occupancy levels (Unplanned bed opening/closures) <input type="checkbox"/> PFI related problems (Private Finance Initiative)
Safety culture	<input type="checkbox"/> Inappropriate safety / efficiency balance <input type="checkbox"/> Poor rule compliance <input type="checkbox"/> Lack of risk management plans <input type="checkbox"/> Inadequate leadership example (e.g. visible evidence of commitment to safety) <input type="checkbox"/> Inadequately open culture to allow appropriate communication <input type="checkbox"/> Inadequate learning from past incidents <input type="checkbox"/> Incentives for 'at risk'/risk taking' behaviors <input type="checkbox"/> Acceptance/toleration of inadequate adherence to current practice <input type="checkbox"/> Ignorance/poor awareness of inadequate adherence to current practice <input type="checkbox"/> Disempowerment of staff to escalate issues or take action

<b>Education and Training</b>	<b>Components</b>
Competence	<input type="checkbox"/> Lack of knowledge <input type="checkbox"/> Lack of skills <input type="checkbox"/> Inexperience <input type="checkbox"/> Inappropriate experience or lack of quality experience <input type="checkbox"/> Unfamiliar task <input type="checkbox"/> Lack of testing and assessment
Supervision	<input type="checkbox"/> Inadequate supervision <input type="checkbox"/> Lack of / inadequate mentorship <input type="checkbox"/> Training results not monitored/acted upon
Availability / accessibility	<input type="checkbox"/> Training needs analysis not conducted/acted upon <input type="checkbox"/> On the job training unavailable or inaccessible <input type="checkbox"/> Emergency Training unavailable or inaccessible <input type="checkbox"/> Team training unavailable or inaccessible <input type="checkbox"/> Core skills training unavailable or inaccessible <input type="checkbox"/> Refresher courses unavailable or inaccessible
Appropriateness	<input type="checkbox"/> Inappropriate content <input type="checkbox"/> Inappropriate target audience <input type="checkbox"/> Inappropriate style of delivery <input type="checkbox"/> Time of day provided inappropriate

Team Factors	Components
Role Congruence	<input type="checkbox"/> Lack of shared understanding <input type="checkbox"/> Role + responsibility definitions misunderstood/not clearly defined
Leadership	<input type="checkbox"/> Ineffective leadership – clinically <input type="checkbox"/> Ineffective leadership – managerially <input type="checkbox"/> Lack of decision making <input type="checkbox"/> Inappropriate decision making <input type="checkbox"/> Untimely decision making (delayed) <input type="checkbox"/> Leader poorly respected
Support and cultural factors	<input type="checkbox"/> Lack of support networks for staff <input type="checkbox"/> Inappropriate level of assertiveness <input type="checkbox"/> Negative team reaction(s) to adverse events <input type="checkbox"/> Negative team reaction to conflict <input type="checkbox"/> Negative team reaction to newcomers <input type="checkbox"/> Routine violation of rules/regulations <input type="checkbox"/> Lack of team openness/communication with colleagues <input type="checkbox"/> Inadequate inter-professional challenge <input type="checkbox"/> Failure to seek support <input type="checkbox"/> Failure to address/manage issues of competence (whistle blowing)