USE OF SIMULATION TO IMPROVE TEAM PREPAREDNESS FOR VERTICAL EVACUATION OF A CRITICAL CARE PATIENT DURING LIFT FAILURE

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10.1136/bmjstel-2019-aspihconf.49

Project description Many hospitals have clinical areas accessible by lifts: in the event of fire or lift failure evacuation via stairs becomes necessary. Management of critical care patients during a lift failure offers challenges associated with a requirement for continuous monitoring, resuscitation and organ support using specialist equipment.1 Reviews of mass patient evacuation highlight the benefits of frequent simulation and involvement of external organisations on their success.2 Aintree University Hospital has developed a standard operating procedure (SOP) for the vertical transfer of critical care patients in the event of lift failure. Through an in-situ simulation exercise the aim was to test effectiveness of the new SOP and assess for latent errors in addition to offering a collaborative training opportunity for the hospital medical emergency team (MET) and external support agencies. Two simulations took place in locations vulnerable to lift failure. The MET were required to stabilise an unwell simulator patient and perform a vertical evacuation utilising the SOP. In each simulation an external emergency retrieval team assisted: North West Ambulance Service (NWAS) in scenario 1 and Liverpool Tactical Response Unit (TRU) in scenario 2. A debrief followed and participants provided feedback on perceived challenges.

Summary of results Successful evacuations were achieved in scenario 1 and 2: 38 minutes and 37 minutes respectively. Table 1 outlines the human factors and system errors identified with recommendations for prevention.

Discussion, conclusions and recommendations This project demonstrates safe resuscitation and efficient vertical evacuation of critical care patients is achievable, the SOP triggers the appropriate actions and recruitment of external support. However, the major barrier to its use is the lack of awareness amongst staff of its existence. This exercise revealed latent errors relating to equipment, staff training and our SOP was

### Abstract SC16 Table 1 Factors identified and recommendations

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<th>Factor identified</th>
<th>Recommendation</th>
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<tr>
<td>Loss of situational awareness: Delayed identification of lift failure resulting in delayed request for external support.</td>
<td>Frequent simulation training.</td>
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<tr>
<td>Staff not trained for manual handling of patient for vertical evacuation.</td>
<td>Targeted staff training.</td>
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<td>Inadequate staff awareness of SOP.</td>
<td>Improved circulation and promotion of SOP.</td>
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<td>Physical demand of ascending stairs with equipment.</td>
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Human factor: Delayed identification of lift failure resulting in delayed request for external support.

System error: Staff not trained for manual handling of patient for vertical evacuation.

Inadequate staff awareness of SOP.

Physical demand of ascending stairs with equipment.

Bariatric equipment not available.

Frequent simulation training.

Targeted staff training.

Improved circulation and promotion of SOP.

Adjust SOP: only high priority equipment to be mobilized whilst resource limited for staff.

Cautious admission of bariatric patients to vulnerable wards.