## In-situ Mental Health Simulation with Airline Pilot Observation of Human Factors

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Abstract: Introduction: The integration of the WingFactors in-situ simulation programme has transformed the education landscape at the Whittington Health NHS Trust. To date, there have been a total of 90 simulations - 19 aimed at Paediatric trainees, including 2 Child and Adolescent Mental Health (CAMHS) scenarios. The opportunity for joint debriefs provided by clinical faculty and airline pilots, has created a new exciting avenue to explore human factors within psychiatry. Through the use of real clinical environments and primed actors; the benefits of high fidelity simulation, interdisciplinary and interprofessional learning has been highlighted. The use of in-situ simulation within Psychiatry is a newly emerging concept and its success here has been recognised by unanimously positive feedback from participants and acknowledgement through nomination for the Health Service Journal (HSJ) Award (Best Education Programme 2021). Methodology: The first CAMHS simulation featured a collapsed patient in the toilet with a ligature tied around her neck, accompanied by a distressed parent. This required participants to consider; emergency physical management of the case, alongside helping to contain the mother and maintaining situational awareness when transferring the patient to an appropriate clinical area. The second simulation was based on a 17-year-old girl attempting to leave the ward after presenting with an overdose, posing potential risk to herself. The safe learning environment enabled participants to explore techniques to engage the young person and understand their concerns, and consider the involvement of other members of the multidisciplinary team. The scenarios were followed by an immediate 'hot' debrief, combining technical feedback with Human Factors feedback from uniformed airline pilots and clinicians. The importance of psychological safety was paramount, encouraging open and honest contributions from all participants. Key learning points were summarized into written documents and circulated. Findings: The in-situ simulations demonstrated the need for practical changes both in the Emergency Department and on the Paediatric ward. The presence of airline pilots provided a novel way to debrief on Human Factors. The following key themes were identified: -Team-briefing ('Golden 5 minutes') - Taking a few moments to establish experience, initial roles and strategies amongst the team can reduce the need for conversations in front of a distressed patient or anxious relative. -Use of checklists / guidelines - Principles associated with checklist usage (control of pace, rigor, team situational awareness), instead of reliance on accurate memory recall when under pressure. -Read-back - Immediate repetition of safety critical instructions (e.g. drug / dosage) to mitigate the risks associated with miscommunication. -Distraction management - Balancing the risk of losing a team member to manage a distressed relative, versus it impacting on the care of the young person. -Task allocation - The value of the implementation of 'The 5A's' (Availability, Address, Allocate, Ask, Advise), for effective task allocation. Conclusion: 100% of participants have requested more simulation training. Involvement of airline pilots has led to a shift in hospital culture, bringing to the forefront the value of Human Factors focused training and multidisciplinary simulation. This has been of significant value in not only physical health, but also mental health simulation.

**Keywords:** human factors, in-situ simulation, inter-professional, multidisciplinary

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