

research is lacking and therefore this unique study aims to investigate the ECG features that are statistically significant for the presence of RA-LA misplacement.

Methods Over a 10-year period in-patient and Emergency Department records were scrutinised for evidence of RA-LA misplacement. Statistical analysis of both paired normal and RA-LA misplacement ECGs was performed using MDCalc Diagnostic Test Calculator and Fischer's exact test.

Results Of the 335 lead misplacements identified 143 (42.7%) were RA-LA misplacement. ECG machines detected only 58% of RA-LA misplacements. In lead I inverted P waves were present in 103 of 117 (88%) ECGs and inverted QRS complexes in 100% of ECGs. T waves were inverted in 103 ECGs (72%), upright in 31 (21.7%) and flat in 9 (6.3%). R waves were identified in lead aVR in 113 (79%). Atrial fibrillation was present in 26 (18.2%) ECGs and only 2 (7.7%) were correctly diagnosed by the ECG machine with lead misplacement.

Conclusion Highly statistically significant ECG features of RA-LA misplacement are inverted P waves and inverted QRS complexes in lead I and the presence of R waves in lead aVR. Their absence does not exclude the diagnosis. In this study ECG machines failed to detect almost half of all RA-LA misplacements. Education and training is required to recognise ECG lead misplacements. ECG interpretative software should incorporate these findings into their diagnostic algorithms.

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THE IMPACT OF FRAILTY SCREENING OF OLDER ADULTS WITH MULTIDISCIPLINARY ASSESSMENT OF THOSE AT RISK DURING EMERGENCY HOSPITAL ATTENDANCE ON THE QUALITY AND SAFETY OF CARE (SOLAR): A RANDOMISED CONTROLLED TRIAL

¹Aoife Leahy*, ²Louise Barry, ¹Gillian Corey, ¹Aoife Whiston, ³Helen Purtil, ⁴Denys Shchetkovskyy, ⁴Damien Ryan, ⁵Elaine Shanahan, ³Margaret O'Connor, ¹Rose Galvin. ¹School of Allied Health, Faculty of Education and Health Sciences, Ageing Research Centre, Health Research Institute, University of Limerick, Ireland; ²School of Nursing, University of Limerick, Ireland; ³Department of Mathematics, University of Limerick, Ireland; ⁴Limerick EM Education Research Training (ALERT), Emergency Department, University Hospital Limerick, Ireland; ⁵Department of Ageing and Therapeutics, University Hospital Limerick, Ireland; *denotes presenting author

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Background Comprehensive multidisciplinary geriatric assessment (CGA) has been proven to improve outcomes in hospitalised older adults but there is limited evidence of its effectiveness in the Emergency Department (ED). We aim to assess the benefits of CGA in the ED for frail older adults.

Methods Older adults over 75 who presented with medical complaints and screened positive for frailty on the ISAR (>/=2) were randomised to geriatrician-led multidisciplinary comprehensive geriatric assessment and management or to usual care (randomisation allocation 1:1). The primary outcome was waiting time in the ED. Secondary outcomes were mortality, ED re-attendance, hospitalisation, nursing home admission, quality of life and functionality at 30 days and 180 days.

Results 228 patients were recruited with a mean age of 83.75. (113 in intervention group, 115 in Control group). There was a statistically significant improvement in ED waiting times in

the intervention group (17.4 hours vs 21.1 hours $p = 0.013$). The intervention group had significantly lower rates of ED re-attendance, hospitalisation, nursing home admission and higher self-reported function as per Barthel score at 180 days but not 30 days. There was a statistically significant benefit in self-reported quality of life scores in the intervention group (EQ5D5L).

Conclusion Multidisciplinary assessment of older frail adults in the ED setting conferred a statistically significant improvement in ED waiting times at index visit and lower rates of ED re-attendance, nursing home admission, quality of life and function at 180 days. Further multi-centre trials are warranted to explore the external validity of the findings.

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EXPLORING BARRIERS AND ENABLERS TO SIMULATION BASED TRAINING IN EMERGENCY DEPARTMENTS: AN INTERNATIONAL QUALITATIVE STUDY (BEST-ED STUDY)

Marcus Jee Poh Hock*, Ella Murphy. Emergency Department, University Hospital Galway, Ireland; *denotes presenting author

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Introduction Simulation based training (SBT) has gained significant traction within Emergency-Medicine (EM). The growing body of evidence describes the benefits that SBT can bring. However, identifying barriers and enablers when establishing successful SBT programmes in busy Emergency Departments (ED's), and ensuring longevity of such programs, can be difficult.[MJ1]

Objective We aim to identify barriers and enablers to Simulation based training in busy Eds.

Methods We explored and analysed the thoughts, experience, and opinions of professionals involved in simulation based training and organisational support. 32 participants across 15 international sites were invited to a semi-structured interview process. We included participants from a variety of backgrounds, from clinical staff to management staff. Transcribed interview data was classified and coded based on Capability, Opportunity, and Motivation (COM-B) domains and analysed based on Theoretical Domains Framework (TDF). Frequency of the most mentioned thematic domain among participants are reported.

Results The interview data revealed several common themes, including the following: knowledge and skills (90%), support and leadership (96%), mental barriers (87.5%), local culture (96.6%), dedicated space (65.2%), time constraints (46.8%), social influence (87.5%), education (90.6%), professional development (68.75%), exams (59.3%), and personal goals (93.75%). Management staff was observed to prioritise resource, staffing, and flow, while the clinical cohort tended to focus on specialty and personal development when it came to simulation training in the ED.

Conclusion Potential barriers and enablers to SBT and in-situ simulation for Emergency Departments were identified through interviews conducted in this study. The central themes in terms of barriers and enablers were local culture, leadership, individual needs, resources and optimisation. A tailored approach is vital for establishing a successful SBT and in situ simulation program.