

Evaluating Elderly-Specific Triage Tools in a Pre-hospital Setting: A Systematic Review

Introduction An aging global population results in significant changes in the demographic of major trauma patients. Despite this, current triage protocols in the United Kingdom do not include geriatric-specific parameters which leads into under-triage among the elderly population.

Objectives This review aims to analyze the quality of elderly-focused triage systems implemented worldwide and interpret findings in the context of the United Kingdom. Primary outcome: sensitivity and specificity of the triage tool. Secondary outcome: percent change in-hospital mortality after elderly-specific tool implementation.

Methods Literature search from PubMed and Imperial databases were used to identify primary research into Geriatric Trauma and the triage tools. PRISMA criteria was used to narrow down papers. Studies were appraised using the Quality Assessment of Diagnostic Accuracy Studies-2 and the Quality Assessment Tool for Quantitative Studies accordingly by two independent reviewers. Results from the studies were evaluated using narrative synthesis.

Results For the primary outcome, all 7 studies demonstrated an increase in sensitivity when compared to the non-specific protocol (17% to 160% increase). Sensitivity ranged from 13% to 96%. Only one tool met the American College of Surgeons Committee on Trauma (ACS-COT) sensitivity target (95%). All elderly-focused tools demonstrated a decrease in specificity (6.1% to 81% decrease). Specificity ranged from 17% to 93%. Three criteria met the ACS-COT specificity target (75%).

No tools met the ACS-COT targets for sensitivity and specificity simultaneously.

Jom Bhumitrakul¹,
Jeremy Cheong²,
Charlotte Yu¹, Sarah
Suh³, Maya
Satheeskaran³, Yoon
Soo Park³, Christie
Tsang³, Jeong Hwa
Hong¹, Yong Hwa
Hong⁴

¹ King's College London GKT
School of Medical Education,
King's College London

² Newcastle University Medical
School, Newcastle University

³ Imperial College London School
of Medicine, Imperial College
London

⁴ St George's Hospital Medical
School, St George's University of
London

Correspondence to:

Jom Bhumitrakul
King's College London GKT
School of Medical Education,
King's College London,
London, England, UK

jomb24@gmail.com

For the secondary outcome, 4 studies showed a percentage decrease in mortality, ranging from -10.9% to -32.9%.

Conclusion Despite an improvement in sensitivity of geriatric-focused triage tools, their overall diagnostic efficacy in identifying elderly trauma needs remains inadequate. Elderly-focused triage correlated with decreased mortality rates in older adults, but the extent to which triage tools affected mortality was unquantified.