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Response to "Inpatient illness severity surveys provide essential data for planning capacity and managing patient flow in the acute hospital setting" (Journal of the Intensive Care Society 2016; 17(3): 196–201)

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Dear Editor,

The recent paper by Garland et al. (Garland A, Ashton-Cleary D, Sinclair R. Inpatient illness severity surveys provide essential data for planning capacity and managing patient flow in the acute hospital setting. *JICS.* 2016; 17: 196-201) regarding the use of a Modified Early Warning Score (MEWS) as a surrogate for the Association of United Kingdom University Hospitals' Acuity/Dependency tool contains misleading inaccuracies.

The authors state: *"… The Modified Early Warning Score (MEWS) developed by intensive care physicians was recently renamed as the National Early Warning Score (NEWS) by NHS England as part of a drive to improve acuity recognition in acute NHS hospitals and trigger early referral for specialist input…",* citing two inappropriate references. However, Morgan et al. published the first early warning score (EWS) in 1997 and Stenhouse et al. described the first 'modified' version (i.e., MEWS) in 2000. Since then, a confusing array of different EWS – many named MEWS (modified EWS) - has been introduced into clinical practice.[1] In 2012, the Royal College of Physicians of London (RCP) developed NEWS, which was based on a minor modification of the VitalPAC EWS (ViEWS).[2] NEWS has greater discrimination for predicting patients at risk an adverse outcome within 24 hour than other published EWS systems[3] including the Gardner-Thorpe MEWS[4] used in Garland et al.'s study (c-statistic: NEWS 0.87, Gardner-Thorpe MEWS 0.83).

Garland et al. also suggest MEWS has been "…*renamed as the National Early Warning Score (NEWS) by NHS England…",* although this is not supported by the references they cite. We are

unaware of any such act. Moreover, as NEWS and the many different versions of MEWS vary in their composition and performance, this would be inappropriate.

Garland et al. also state *"… Current care pathways for patients in the MEWS systems recommend escalation, if the MEWS rises above 5 …"*, citing the RCP report. It is important to note that different early warning systems vary substantially in terms of how the aggregate score maps to the risk of mortality or other adverse events (e.g. unanticipated ICU admission).[2,3,5] Consequently, the score threshold of ≥5 used to trigger a prompt clinical review of patients recommended by the RCP applies only if NEWS is used. It is also worth noting that the score thresholds suggested for NEWS by the RCP working group were arrived at pragmatically, based on the associated risk of adverse outcomes and the expected workload generated in a single hospital. A balance must always be achieved between the benefits of the early clinical assessment of patients with high/rising EWS values and the disadvantages of "alarm fatigue". The RCP working group also notes: "… the most effective way to formally evaluate the effectiveness of NEWS at improving clinical outcomes was to implement it into practice and evaluate its performance on a large scale …" Unfortunately, there are no large-scale evaluations of the impact of using different thresholds to trigger a clinical response.

References

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