Compliance With and Use of Up-to-Date National Academies of Medical Dispatch Medical Priority Dispatch System Protocols in Dispatch Practice and Research Studies Must Be a Requirement

To the Editor:

We observed significant omissions and errors in the study’s methods/design, findings, and conclusions in the recent paper by Buck et al., which we respectfully want to point out.

First, the National Academies of Emergency Dispatch Medical Priority Dispatch System (MPDS) protocol version (Version 11.1, valid from 2001 to 2004) used in this study is significantly outdated. Three subsequent versions (Version 11.2, valid from 2004 to 2006; Version 11.3, valid from 2006 to 2008; and Version 12.0, valid from 2008 to date) have been issued, each containing significant clinically predictive modifications in the stroke protocol (Protocol 28). Using an outdated protocol is unsafe in a communication center, not the standard of dispatch practice, and misleads readers about the “current” effectiveness of the state of the art of an evolving protocol system. In the MPDS Version 11.1 protocol’s rules at that time, a compliant emergency medical dispatcher selection of the “stroke” chief complaint was limited only to cases in which the caller used the word “stroke” to describe the patient’s condition. To select a stroke chief complaint if confronted with other symptoms was noncompliance to protocol back then and would not be done by certified emergency medical dispatchers. The automated evaluation process (stroke evaluation and diagnostic tool) in the current MPDS stroke protocol Version 12.0 (available to centers on request) incorporates the validated Cincinnati prehospital stroke scale in the final dispatch coding after detailed identification of stroke possibility in 911 callers, identifying specific combinations of signs and symptoms relevant to stroke.

Second, for a dispatch protocol-based study to be valid, all cases studied must either be audio-reviewed for protocol compliance or come from a National Academies of Emergency Dispatch (NAED)-accredited dispatch center that has a documented, proven high protocol compliance. A minimum of 90% to 95% compliance level is required with monthly compliance reporting of audited cases. Without verified high compliance, one cannot study the MPDS protocol because noncompliant cases with subjective call taker decisions will skew the findings. We assume that protocol compliance audit was not part of Buck et al’s study, because the Los Angeles Fire Department Communications Center is not National Academies of Emergency Dispatch-accredited, and protocol compliance was not reported.

Third, other chief complaint codes that are known to contain patients with stroke were not accounted for in the study. The authors used the Los Angeles prehospital stroke screen method, which does not identify all strokes despite its reported high sensitivity and specificity, to identify 1283 strokes from the initial database (n=3474) and finally using 25% (871 of 3474) records with MPDS codes, which could have potentially confounded the findings.

It is known that 911 callers may describe stroke victims in any number of ways with complaints such as falls, unconscious, not alert, diabatic, weakness, headache, general illness, and so on. The MPDS has been purposely designed to capture these symptoms on nonstroke chief complaint determinants and prioritize cases accordingly, even when the caller does not recognize/describe the patient’s condition as stroke. Buck et al only measured when the dispatcher identified stroke during the very first question posed in the MPDS protocol: “What’s the problem, tell me exactly what happened?,” not when stroke-like symptoms were identified later in the MPDS. This demonstrates lack of basic understanding of how the MPDS protocols work and relate to emergency medical services response and patient treatment.

Surprisingly, the study does not mention when an emergency medical services response would differ from nonstroke patients and how any difference in response would change the patient’s treatment.

A recently published study of the basic protocol’s effectiveness (selection in the case entry section of the stroke chief complaint) in the San Diego emergency medical services dispatch system was a better scientific evaluation of what the current NAED protocol and training does using MPDS protocol Version 11.2.

In the future, publications of the Stroke journal’s stature should engage reviewers with the knowledge of the previously mentioned dispatch-related parameters to correctly validate that what is claimed is what is studied. The NAED has an Institutional Review Board and Research Council to help review methodology in this regard.

Disclosures

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