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Increased ambulance activity does not improve patient outcomes

INVITERT KOMMENTAR

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The sharp increase in Emergency Medical Communication Centre (EMCC) dispatches for suspected stroke does not appear to have improved treatment quality, and current practice may also have negative unintended consequences.

In an article in this edition of the Journal of the Norwegian Medical Association, Jamtli et al. highlight several important points that should interest healthcare leaders who are seeking effective tools to address future challenges (1). The study is a descriptive, retrospective registry study based on anonymised Emergency Medical Communication Centre (EMCC) data from the Norwegian Patient Registry and the Norwegian Stroke Registry for the period 2020–2023. As the authors note, the number of EMCC dispatches for suspected stroke has increased substantially (54 %), with no corresponding rise in the incidence of acute stroke (0.4 %). This increased activity has not resulted in better treatment or demonstrable improvements in key quality indicators over the period, raising questions about the causes and consequences of such increased resource use and overtriage.

Several factors may help explain these findings. High workloads, demands for rapid assessment and external factors, such as regulatory oversight, may have impacted on EMCCs' decision-making (1). National public campaigns aimed at

raising awareness of stroke symptoms also appear to have prompted greater public engagement, increasing the demand on prehospital services (2).

Furthermore, it has previously been assumed that high sensitivity for recognition of stroke at EMCCs leads to more patients receiving appropriate treatment (1). Given that this study identifies a reduction in specificity in EMCC assessments, such prior assumptions may need to be reconsidered.

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EMCC operators must rapidly assess symptoms, severity and the need for an emergency medical response. National regulations require 90 % of calls to be answered within 10 seconds and acute cases (red triage category) to be fully assessed within 60 seconds. Such tight time constraints leave little opportunity for detailed questioning, so operators often err on the side of caution rather than relying on clinical precision. Assessing the need for medical care over the telephone is challenging: the caller's perception that urgent action is needed has to be weighed against the probability of serious illness, and stroke symptoms can be particularly difficult to assess (3).

EMCC Oslo handles by far the largest number of emergency calls in Norway, serving a population of around 1.7 million. The workload is higher than at other EMCCs, but the wide variation in assessment accuracy and resource use suggests that workload alone does not account for these trends.

Several research projects on prehospital recognition of stroke were conducted in Oslo during the study period (1). Increasing the focus on a specific diagnosis can impact on operators' assessments. Furthermore, training, clinical emphasis and frequent discussions about stroke may lower the threshold for initiating EMCC dispatches at the highest urgency level.

During the same period, EMCC Oslo's management of time-critical conditions was also subject to monitoring (4, 5). Regulatory oversight can lead operators to adopt a more risk-averse approach, particularly when managing critically ill patients while facing a high workload and strict time constraints. This in turn can lead to greater emphasis on sensitivity than specificity, resulting in a more liberal approach to initiating emergency responses and contributing to systemic overtriage.

> ***«When increased resource use fails to improve patient care – in terms of thrombolysis rates or faster treatment initiation – overtriage represents a mismatch between effort and clinical benefit»***

EMCC dispatches are resource-intensive and carry inherent risks (6). Ambulance driving is associated with an increased risk of accidents, and overuse of acute resources places a strain on both personnel and equipment. Overtriage ties up ambulance resources on call-outs that, in hindsight, were not time-critical. This potentially affects response times for other serious incidents.

Prehospital overtriage can also increase admissions to emergency departments, adding to the burden on already busy units. Increased patient flow and time pressure can, in turn, lead to more patients undergoing urgent imaging, such as CT scans, which reduces capacity and delays diagnosis for other patients.

When increased resource use fails to improve patient care – in terms of thrombolysis rates or faster treatment initiation – overtriage represents a mismatch between effort and clinical benefit. Jamtli et al. deserve credit for providing supplementary information that challenges established assumptions and offers a broader perspective on the complexity of the situation.

Short assessment times and high workloads contribute to overtriage, and the findings suggest that the continued research focus and regulatory oversight may have impacted on practice, particularly in Oslo. This highlights the need for a comprehensive evaluation of triage processes in EMCCs, where patient safety, resource use and risk are carefully weighed.

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