The future of AVS, dizziness, and vertigo in emergency departments: Part II. Policy innovations for transformative change

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In the second article of this five-part series, Dr Millie Nakatsuka discusses the barriers that contribute to the overuse of neuroimaging associated with the diagnosis of acute vestibular syndrome and proposes systemic reform

In the fast-paced and high-stakes emergency environment, physicians use tacit guidelines and heuristic shortcuts as efficient and accurate methods to support clinical decision-making. These vital intuitive processes are nevertheless vulnerable to cognitive biases that distort healthcare provision, driven by systemic professional, organisational, and public pressures that function as perverse incentives.

Professional pressures

Neuroimaging can masquerade as a tempting, cost-effective alternative promising efficiency, reduced emotional exhaustion, and risk minimisation. In the current system substantial costs of not ordering neuroimaging are borne by the physician. The personal negative consequences of ordering unnecessary investigations are minimal in comparison. Neuroimaging reduces time per patient consult, a satisfying accomplishment valued by colleagues, patients, and the healthcare service.

‘Normal scans’ also reduce unpleasant uncertainty and offer reassurance for risk-averse physicians who lack confidence in their skills, providing the illusion of medicolegal protection against malpractice claims of a missed stroke or delayed diagnosis threatening both reputation and career.

Organisational pressures

Current policies have not effectively addressed emergency department crowding and access block, with consequent emergency physician burnout. The ‘4-hour standard of care’ aspired to have patients admitted, discharged, or transferred from emergency departments within 4 hours of presentation. Although decreasing time-sensitive indicators overall reduced adverse outcomes and healthcare costs, time-based targets were not useful metrics for healthcare service performance.

By focusing on actual time spent in the emergency department rather than insufficient inpatient bed capacity or alternative community-based services, emergency physicians were pressured to meet unrealistic targets with inevitable reductions in the quality of care

provided to individual patients, resulting in poorer outcomes and increased physician burnout.

Furthermore, funding maldistribution has substantially increased demands on free public emergency departments, especially in Australia. Inadequate Medicare rebates for bulk-billed general practitioners have restricted access to free primary care with increasing health inequity and burden of disease. A state of emergency was decaled by The Australasian College for Emergency Medicine in 2022, highlighting the insufficient inpatient and outpatient (or community-based) capacity to provide subsequent care for the rising deluge of emergency presentations.[1]

Public pressures

A growing culture of blame and litigation accompanies increasingly unrealistic public expectations for perfect free healthcare, delivered immediately, with no diagnostic delay, nor adverse outcomes. This is further complicated by a misperception of the scope of emergency care, which does not exist to provide a comprehensive diagnostic workup of non-emergent conditions, focusing instead on treating imminent life and organ-threatening crises, followed by either admission to hospital or longitudinal community-based care with a general practitioner (or hospital outpatient service). This misunderstanding is typified by public perceptions that the lack of an immediate diagnosis confirmed by neuroimaging is substandard care.

Lack of evidence for interventions

There is a lack of high-quality evidence of interventions that reduce wasteful dizziness-related neuroimaging in the emergency department. Further research is required as the scope of existing evidence is largely neither limited to dizziness-related neuroimaging nor emergency settings, and some studied interventions are simply not generalisable nor viable long-term. A 2022 systematic review of interventions to reduce computerised tomography (CT) use in emergency departments showed limited evidence on short-term and long-term efficacy. [2] Many interventions depended on alternative diagnostic options, such as access to other subspecialists.

Pathways for systemic change

The primary method of improving patient outcomes is to adapt medical education and training to pave the way for systemic reform.

1. Focus on clinical skills

The third guideline for Reasonable and Appropriate Care in the Emergency Department (GRACE-3) for acute dizziness and vertigo concluded in 2023 that it is paramount for frontline point-of-care emergency physicians to receive education and training to recognise patterns of clinical presentation based on timing and triggers, and reliably

perform and interpret the results of the required bedside examination techniques. [3] An educational and training program with validated content, methods, duration, and frequency that results in operator and interpreter proficiency is thus a policy priority.

2. Navigating technology

Education should incorporate methods of evaluating and integrating technological advances into clinical practice to improve physician performance and efficiency. One exciting possibility is real-time artificial intelligence-powered medical transcription, which generates concise notes from patient consultations. In contrast, other industry-promoted technologies, including telehealth and video-oculography, are not viable alternative diagnostic tools to merely compensate for lack of confidence, insufficient training or to alleviate medicolegal fears.

3. Fostering leadership

Medical curricula need to enhance formal leadership training with health advocacy and promotion skills. Widespread cultural change and public support will be required to ensure that future policies cohere and are allocated appropriate funding.

We should also note that the time and effort required to develop a validated education and training program and implement it at a sufficient scale would be squandered without first alleviating the systemic pressures on emergency physician staffing and workload.

Upcoming article in 2024

In the upcoming article, we examine the impact of isolation on health equity and medical decision-making for emergency dizziness presentations.

References

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Further reading

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