



# Multimorbidity in emergency departments: urgent need for integrated care

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*Emergency departments need to change to meet complex needs of people with multimorbidity, especially in younger patients*

The increasing prevalence of multimorbidity, defined as multiple chronic medical conditions in an individual,<sup>1,2</sup> presents an important challenge for healthcare systems. This growing trend can be attributed to a complex interplay of factors.<sup>3</sup> Advancing age correlates with higher chances of developing multiple chronic conditions, which is a larger problem with increased life expectancy in ageing populations. Medical advancements have improved survival for people with acute conditions, such as myocardial infarction and stroke, enabling longer lives but often with concurrent health issues.<sup>4</sup> Moreover, increased awareness, improved diagnostic techniques, and research for patients living with chronic diseases also likely contribute to the observed increase in multimorbidity prevalence.<sup>5</sup>

While multimorbidity's impact is well documented in primary care settings,<sup>1,6</sup> its prevalence and effects among patients visiting emergency departments for acute conditions remain unclear.

In ageing populations globally, multimorbidity has become a prominent characteristic that emergency departments must accommodate. In a linked article, Blayney and colleagues' comprehensive cohort study used robust data from more than 1.1 million emergency department attendances in NHS Lothian (South East Scotland) and reported that multimorbidity is quite common among patients visiting emergency departments.<sup>7</sup> 9.6% of emergency department attendees had multimorbidity; older individuals ( $\geq 65$  years) were more likely to have multimorbidity than younger adults (26.4% of attendees who were  $\geq 65$  years v 4.3% of  $< 65$  year-olds). Multimorbidity was strongly associated with higher mortality at 30 days (8.2% v 1.2%), longer stays in emergency departments (median 4.0 h v 3.3 h), higher rates of hospital admission (60.1% v 20.5%), and more frequent re-visits to this department within seven days (7.8% v 3.5%). These results highlight significant outcome disparities between younger and older patients with multimorbidity.<sup>7</sup> Specifically, they report that younger ( $< 65$  years), versus older, patients with multimorbidity have disproportionately worse outcomes, higher risk of mortality, prolonged stays in the emergency department, higher risk of being admitted to hospital, and more unplanned re-visits after discharge.

These findings call for a re-evaluation of how doctors in emergency departments identify, assess, and manage patients with concurrent chronic diseases. While decades of emergency

medicine innovations have enhanced acute care, these advancements often prioritise swift diagnosis and treatment of isolated, life threatening conditions. By contrast, patients with multimorbidity present complex interplays of chronic disorders that affect their acute illnesses, treatment regimens, and overall risk profiles. Applying a reductionist, single disease approach to these patients is akin to examining only one facet of a complex situation.

The traditional approach in emergency departments of quickly triaging, diagnosing, and dispositioning accordingly may work well for patients with an isolated acute or acute-on-chronic issue. However, for patients with multimorbidity, essential aspects of their clinical presentation may be overlooked due to the complexity that defies simple algorithms and pathways. In some life threatening situations, important chronic conditions, potential treatment interactions, and even the patient's own care preferences may be overlooked when the main focus is on rapidly resolving the most apparent acute problem.

Some triage systems have begun incorporating multimorbidity considerations by triaging these patients at a higher acuity level,<sup>8</sup> in which multimorbidity is being considered a risk amplifier. However, workflows in emergency departments rarely consider multimorbidity as a factor that increases risk.

Similarly, emergency department protocols could introduce multimorbidity specific risk stratification to better determine appropriate medication and care intensity in healthcare environments after acute care.<sup>9</sup> Patients with multimorbidity are heterogeneous, some might require procedures or inpatient monitoring, while others might not need to be admitted to hospital with only adequate home supports and transition care planning.

Fundamentally, patients with multimorbidity require integrated management plans coherently addressing both acute and chronic components of their overall illness experience. Rather than providers in emergency departments formulating disposition plans based on their traditionally siloed acute care focus, multimorbidity should trigger specific solutions that would involve comprehensive care plans tailored to each patient's unique needs. This personalisation could have resource implications because additional personnel would be required, including specialised roles such as advanced nurse practitioners or clinical pharmacists.

Blayney and colleagues' findings underscore a critical policy area, suggesting that younger individuals with multimorbidity might face specific challenges in accessing appropriate care and support.

The age dependent nature of many health and social care services, typically setting eligibility thresholds around 65-75 years, creates a gap where younger individuals with significant health needs may receive inadequate support, potentially leading to poorer health outcomes.

The study results highlight the profound impact of multimorbidity, putting these patients in emergency departments at increased risk of mortality, admission to hospital, extended stays in emergency departments, and unplanned re-visits after discharge. These outcomes reflect the broader challenges faced by people living with multiple long term conditions, including worse prognosis than people with one condition, higher burden of symptoms and of treatment, greater care needs, and a higher chance of decline in function and quality of life.<sup>10</sup>

Unsurprisingly, this study found that emergency departments care flows were substantially disrupted when multimorbidity was present. Despite being triaged as higher acuity and seen more quickly, patients with multimorbidity still stayed much longer in emergency departments, reflecting the challenges in coordinating comprehensive evaluations and disposition plans. The increased hospital admission rates seen, while potentially appropriate for patients at higher risk, may also result from difficulties of emergency department providers' in formulating safe discharge plans that adequately account for the additive impacts effects from multimorbidity on functional status, social support needs, and follow-up care requirements.

In conclusion, the study by Blayney and colleagues, viewed in the context of broader research on multimorbidity, underscores the urgent need for a shift in emergency care. The high prevalence of multimorbidity among attendees of emergency departments necessitates a more holistic and integrated care approach. Emergency departments must evolve to meet the complex needs of these patients effectively, while researchers and policy makers work towards standardised definitions and measurement approaches to facilitate comparable and actionable research. Policy wise, the results advocate for a re-evaluation of age based criteria for healthcare and social support services. Younger patients with multimorbidity should have access to the same multidisciplinary resources as older adults to mitigate the adverse outcomes associated with their conditions. Additionally, healthcare systems must invest in preventive and community based interventions to manage chronic diseases more effectively, potentially reducing the burden on emergency departments.

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## REFERENCES

- Wallace E, Salisbury C, Guthrie B, *et al*. Managing patients with multimorbidity in primary care. *BMJ* 2015;350:h176. 10.1136/bmj.h176
- Ho ISS, Azcoaga-Lorenzo A, Akbari A, *et al*. Measuring multimorbidity in research: Delphi consensus study. *BMJ Med* 2022;1:e000247. 10.1136/bmjmed-2022-000247
- Head A, Fleming K, Kyridemos C, *et al*. Inequalities in incident and prevalent multimorbidity in England, 2004-19: a population-based, descriptive study. *Lancet Healthy Longev* 2021;2:e489-97. 10.1016/S2666-7568(21)00146-X
- Karamercan MA, Dündar DZ, Slagman A, *et al*. Epidemiology of geriatric patients presenting to emergency departments in Europe: EGERs study. *Eur J Emerg Med* 2023;30:117-24. 10.1097/MEJ.0000000000000997
- Tran VT, Diard E, Ravaud P. Priorities to improve the care for chronic conditions and multimorbidity: a survey of patients and stakeholders nested within the ComPaRe e-cohort. *BMJ Qual Saf* 2021;30:577-87. 10.1136/bmjqs-2020-011219
- Smith SM, Wallace E, O'Dowd T, *et al*. Interventions for improving outcomes in patients with multimorbidity in primary care and community settings. *Cochrane Database Syst Rev* 2021;1:CD006560. 10.1002/14651858.CD006560.pub4
- Blayney MC, Reed MJ, Anand A. Multimorbidity and adverse outcomes following Emergency Department attendance: a cohort study. *BMJ Med* 2024. <https://doi.org/10.1136/bmjmed-2023-000731>
- Taboulet P, Maillard-Acker C, Ranchon G, *et al*. Triage des patients à l'accueil d'une structure d'urgences. Présentation de l'échelle de tri élaborée par la Société française de médecine d'urgence: la FRENCH Emergency Nurses Classification in Hospital (FRENCH). *Ann Fr Med Urgence* 2019;9:51-9. 10.3166/afmu-2018-0101
- Van Cauwenbergh L, Van Kemseke S, Oudaert E, *et al*. Interception of chronic medication discrepancies by the clinical pharmacist in the emergency department. *Eur J Emerg Med* 2023;30:7-14. 10.1097/MEJ.0000000000000961
- Tran VT, Barnes C, Montori VM, *et al*. Taxonomy of the burden of treatment: a multi-country web-based qualitative study of patients with chronic conditions. *BMC Med* 2015;13:115. 10.1186/s12916-015-0356-x