Differences in the pre-hospital management of women and men with stroke by emergency medical services in New South Wales

In reply: We thank Kilkenny and colleagues[1] for their comments on our article.[2] Kilkenny and colleagues examined sex differences in pre-hospital management among 6262 patients with first-ever strokes from the Australian Stroke Clinical Registry (2010–2013) linked with administrative data (emergency, hospital admissions).[3] They found that more women (78.8%) arrived by ambulance than men (72.9%); however, following adjustments for age, frailty and stroke severity, the sex differences were no longer statistically significant.

In our study,[2] we were unable to adjust for stroke severity in ambulance service utilisation owing to data unavailability for those who were not transferred by ambulance. Stroke severity data (Glasgow Coma Scale [GCS]) was available only for 45% (n = 92 507) of the patients who arrived at the hospital by ambulance. After adjusting for age, marital status, country of birth, Indigenous status, hospital region, year of stroke onset, stroke subtype and GCS score, women were less likely to receive emergency medical service management related to stroke care (odds ratio [OR], 0.92; 95% CI, 0.90–0.95). Moreover, women were still more likely to be assessed as having migraine (OR, 3.89; 95% CI, 2.31–6.52), anxiety (OR, 2.85; 95% CI, 1.99–4.09), or headache (OR, 1.42; 95% CI, 1.25–1.61).

Our results are consistent with the findings of Eliakundu and colleagues using patient-level data (n = 4717) from the Australian Stroke Clinical Registry (2015–2017) linked with ambulance and emergency department records for the state of Victoria, where women were less often suspected of experiencing stroke.[4] Taken together, these findings highlight the need for training of paramedics to improve their assessment of women in pre-hospital emergency medical service care and lay the foundation for novel stroke identification strategies.

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4 Eliakundu AL, Cadilhac DA, Kim J, et al. Determining the sensitivity of emergency dispatcher and paramedic diagnosis of stroke: statewide registry linkage study. *J Am Coll Emerg Physicians Open* 2022; 3: e12750. ■