

Epidemiology of Malnutrition Diagnosis in Hospitalized Stroke Patients in Switzerland, 1998 to 2022

Afifa Tanweer & Pedro Marques-Vidal

Department of Medicine, Internal Medicine,
Lausanne University Hospital (CHUV) & University of Lausanne, Suisse

Background and aim

- Stroke is a leading cause of mortality and long-term disability worldwide ⁽¹⁾
- Malnutrition is frequent but under-recognized ⁽²⁾
- It can ensue from as well as lead to poor clinical outcomes ⁽³⁾
- Evidence on its long-term trends, determinants and in hospital consequences at population level remains limited

This study was conducted to investigate the epidemiology and clinical outcomes of malnutrition in hospitalized stroke patients

1. Khandelwal B, Gupta C. 2023, Leading causes of death and disability among the global aging community. The Ageing Population: Impact Analysis on 'Societal and Healthcare Cost'.
2. Bahat G, Aydın T, Kesiktaş FN, Ahışa YC, Ören MM, Erdoğan T, et al., 2025: p. 1–9.
3. Liu P, Tian H, Ji T, Zhong T, Gao L, Chen L, 2023. 15(14): p. 3280.

Methods

Sample

Swiss hospital discharge data base⁽⁴⁾ (1998–2022), 504,192 hospitalizations with stroke (ICD-10 codes I60 to I69)⁽⁵⁾

Indicators

- **Malnutrition:** WHO ICD-10 codes M1: (E40-E46), M2 defined by any ICD-10 code from E40-E46 & a CHOP code (par)enteral nutrition (99.15, 96.6, 96.35) among those without any malnutrition diagnosis code
- **Health Outcomes:** ICU admission (Y/N), In hospital mortality (Y/N), Length of Stay (≤ 5 d/ >5 d).

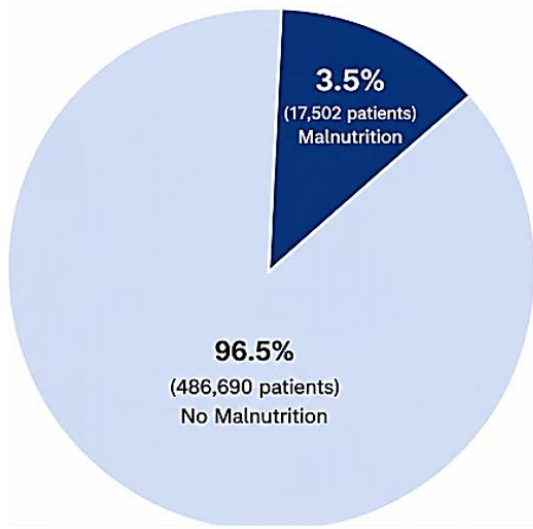
Analysis

Multivariable logistic regression adjusted for year, demographic factors, region, admission type, and CCI (Charlson's Comorbidity Index)

4. World Health Organization. 1993, <https://icd.who.int/browse10/2019/en>.

5. Swiss Federal Office of Statistics. 2025, <https://www.bfs.admin.ch/bfs/de/home.html>.

Prevalence of malnutrition diagnosis in hospitalized stroke patients



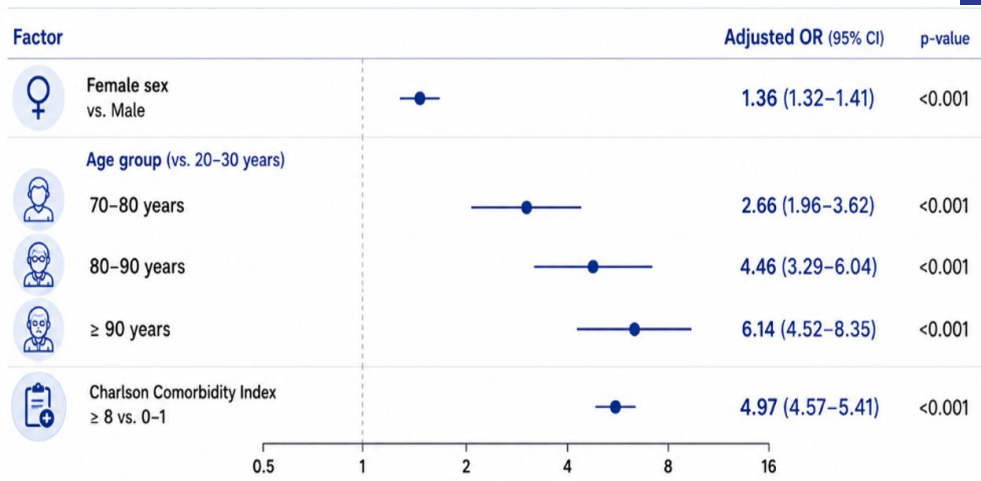
RESULTS

Clinical outcomes associated with malnutrition among hospitalized stroke patients

Outcome	Adjusted OR	95% CI	P-value
ICU admission	1.16	1.11–1.21	<0.001
In-hospital mortality	0.81	0.76–0.86	<0.001
In-hospital mortality (excluded <2d LoS)	1.16	1.06–1.23	<0.001
LoS >5 days	8.14	7.64–8.67	<0.001

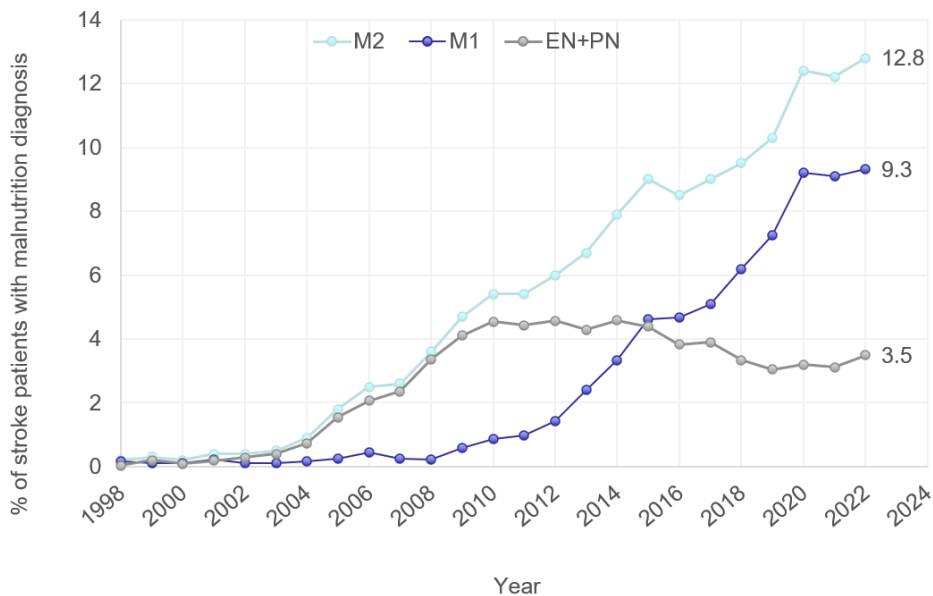
RESULTS

Association of selected factors with malnutrition diagnosis among hospitalized stroke patients



RESULTS

Time trend of stroke patients diagnosed with malnutrition and those receiving (par)enteral nutrition support



RESULTS

Conclusion

& clinical implication

- In Switzerland, hospital malnutrition among stroke patients is increasingly prevalent yet underestimated.
- It is linked with adverse outcomes, which underscores the need for better screening and intervention practices, particularly for the older patients.

Thank you

Afifa Tanweer (Qureshi)



Afifa.Tanweer.Umt@gmail.com

Afifa.Tanweer@chuv.ch