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Quantifying patient care demand through routine healthcare data. A descriptive single center study in psychiatric inpatient settings

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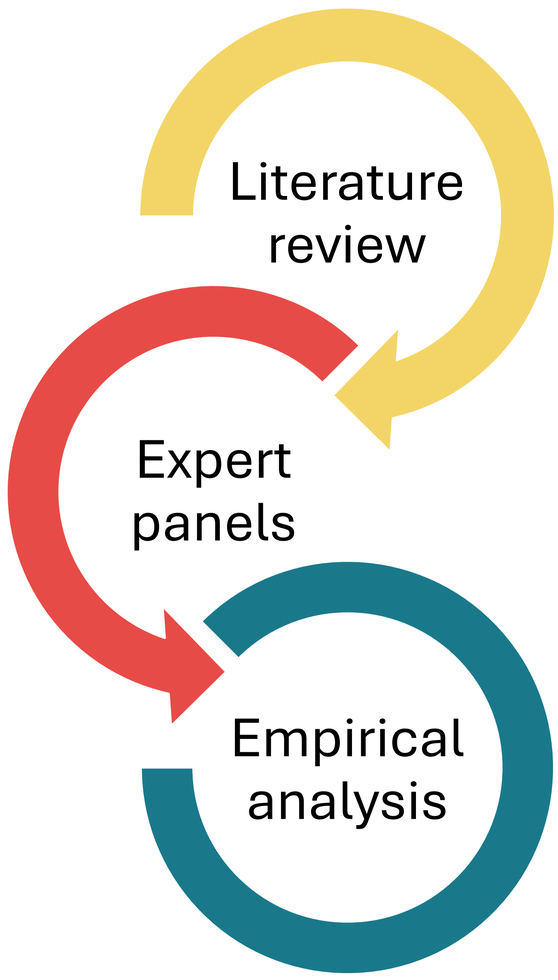
Introduction

- 50% of psychiatric nurses in Switzerland report insufficient staffing to meet patient care demand
- Patients present with multidimensional needs (physical, psychological, social)
- No official staffing recommendations exist for inpatient psychiatry
- Well-founded and practical approaches are urgently needed to align staffing with patient care demand

Research Objective

- To investigate whether routinely collected health data can reliably reflect patient care demand in psychiatric inpatient settings

Methods

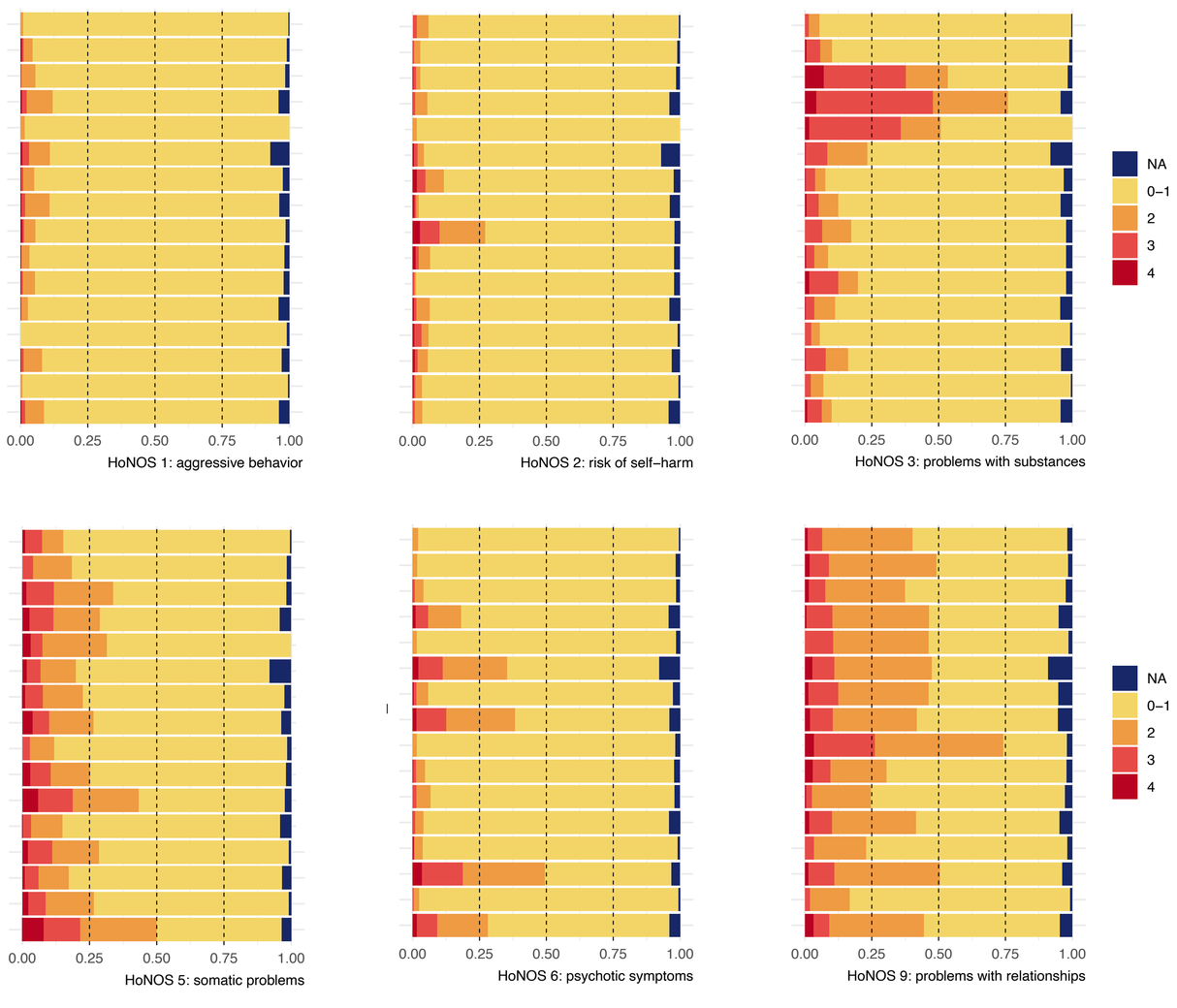


- Population: Nurses
- Concept: Patient characteristics used in staffing approaches
- Context: Psychiatric hospitals

- Four online panels with experts recruited via Swiss Psychiatric Nursing Leaders' Association
- Reviewing characteristics for relevance in the Swiss psychiatric context
- Reviewing validity of routine health data to quantify characteristics

- Setting: Psychiatric hospital
- Participants: Inpatient cases, adult psychiatry, hospitalized between Jan 2021– Dec 2023
- Descriptive statistical methods

Figure 1. Proportion of six symptom severity ratings at admission per unit, assessed with the Health of the Nation Outcome Scale (HoNOS). Ratings range from 0 (no problem) to 4 (severe problem).



Results

- Literature review: Sixteen characteristics identified, classified into symptom severity characteristics (e.g. aggressive behavior, risk of self-harm) and service intensity characteristics (e.g. 1:1 care, use of coercive measures)
- Expert panels: Consensus reached on relevance of identified characteristics. A set of nineteen routine health data variables established to quantify patient care demand
- Empirical analysis: Routine health data of 9,177 cases showed substantial dispersion of patient characteristics, with significant between-unit differences.

Conclusion

- Patient care demand can be quantified without additional documentation effort
- Substantial variation in ratings suggests that the data may accurately reflect the heterogeneity of patient needs, making it a promising foundation to determine staffing requirements based on actual care demands

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