

over a one-year period. Other benefits observed were improvement in staffing consistency, increased staff confidence in managing clinical risks as well as patients reporting improvement in overall experience and engagement.

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## Using Machine Learning to Predict Response to Inpatient Rehabilitation for FND Patients

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**Aims:** Technology has been rapidly expanding in the medical field, of late, AI has been adopted cautiously and is slowly being integrated to practice. Functional Neurological Disorder (FND) patients have a variety of different presentations and premorbid conditions that greatly affect their response to rehabilitation. Currently, there is no admission formula or criteria available that can assist the assessing clinician on suitability for inpatient rehabilitation regarding rehabilitation prognosis.

The aim of this study is to design an admission formula using machine learning to predict rehabilitation prognosis; whether individuals with FND would benefit from inpatient rehabilitation by generating prognostic factors based off data collected from other FND patients who have received inpatient rehabilitation.

**Methods:** Retrospective review of FND patients admitted for inpatient rehabilitation. Over a 4-year period (2021–2024), 55 patients were admitted for FND neurorehabilitation, of which, 48 patients were used in the dataset due to lack of necessary data. Data was extracted from medical records and department databases to create a comprehensive dataset. The model was trained and tested by logistic regression, with a data set that was split into 70% training and 30% testing.

**Results:** The UK Functional Assessment Measure (UKFIM+FAM) was used to measure outcomes and patients were divided into two categories: improvement in FIM+FAM outcome above 25% from baseline or below. We discovered the model was 86% accurate in predicting the FIM+FAM outcome.

**Conclusion:** Machine learning may act as a tool that clinicians can use when assessing suitability for inpatient rehabilitation. Although there are limitations, namely, appropriate assessment scales and data-set size, the model is able to predict rehabilitation outcomes with 86% accuracy. Since this is supervised-learning, we expect with time and a larger data set, there will be improvement in accuracy.

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## Suicide Prevention Strategies for Older People with Mental Health Challenges in Tower Hamlets Centre for Mental Health: A Qualitative Study

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**Aims:** Suicide remains one of the leading causes of death worldwide, with rates among older adults increasing steadily. Older people face higher suicide completion rates, especially in 45–49 and 90+ age group. The impact of suicide on society is profound, underlining the need for targeted interventions for this demographic.

This project follows the Triple Aim framework to improve overall health system by:

Enhancing suicide prevention in older populations through mental well-being promotion.

Increasing awareness and improving patients' experience by creating a supportive, responsive environment.

Developing a replicable model across healthcare settings, contributing to broader suicide prevention efforts.

**Methods:** Focus groups were conducted with 3 cohorts: patients, families and staff. 4–8 participants were recruited for each group using purposive sampling method. Semi-structured interview was conducted to explore their views on suicide prevention, their challenges, and expectations.

**Results:** Many patients identified negative emotions: stress and overthinking are contributing factors. Many find feelings of guilt/hopelessness, bereavement particularly challenging. Additionally, social isolation, physical health problems and poor sleep also lead to suicide.

According to staff, many patients lack access to service due to language barrier, immobility/disabilities, socio-economic deprivation and limited access to technologies. Cultural beliefs and stigma play a major role. Staff also highlighted that role transition to retirement results loneliness/isolation.

Preventive strategies include normalisation and promoting awareness in public. Having representation in peer support group can improve stigma in minority. Social interventions can aid role transition and provide sense of belonging. Integrated care with multiple touchpoints from emergency care to community/GP follow-ups alongside with multidisciplinary approach with occupational therapist and psychologist are crucial in providing patient-centred care.

**Conclusion:** These focus groups underscore the importance of suicide prevention for older people. The insight gained will inform future strategies and prioritise change ideas in our service.

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