

Utilisation of the QRISK3 Tool: Targeted Cardiovascular Risk Reduction in Rehabilitation Inpatients

Fraser Scott¹, Saham Aden², Nikhil Sharma¹, George Gillett¹, Rajesh Mohan¹

¹ Heather Close Rehabilitation Service, South London and Maudsley NHS Foundation Trust; ² Faculty of Medicine, King's College London

Patients with severe mental illness (SMI) are at higher risk of early mortality. This is partly attributable to cardiovascular risks. Lifestyle factors, presence of SMI and use of antipsychotics all contribute to increased risk.

The QRISK3 risk calculator incorporates risk factors that are specific to SMI and is an improvement on QRISK2 and. It is validated to predict 10 year mortality from myocardial infarction (MI) or stroke.

This project aimed to identify cardiovascular risk in an inpatient rehabilitation cohort using QRISK3 risk calculator and use the information to personalise interventions to reduce risk from cardiovascular disease.

METHODS:

1. The clinical and sociodemographic parameters needed to calculate QRISK3 risk scores were obtained for all current rehabilitation inpatients from case note review and assessments.
2. QRISK3 scores were calculated for all inpatients. Based on this risk stratification, patients with high risks were offered personalised risk reduction interventions using care plans.
3. Care plans were coproduced with patients, and included specific risk factors identified from QRISK3. Each target area was turned into personal goal and supported by the MDT. Patient feedback was used to improve the approach.

RESULTS:

- All current inpatients (n=24) were included in this project, and the characteristics of this sample are shown in Table 1.
- The mean QRISK3 score was 10% (range 0.6%-28.2%). Nine (37.5%) patients had a QRISK3 score >10%, indicating high risk. (Figure 2). Despite an average age of >50 years, the cardiovascular risk for rehabilitation inpatients is very high.
- Risk reduction interventions included: improving physical health care plans, healthy-eating, enhancing diabetic management, advice on smoking cessation, and activity and exercise. These were coproduced with patients based on their risk factors and preferences.

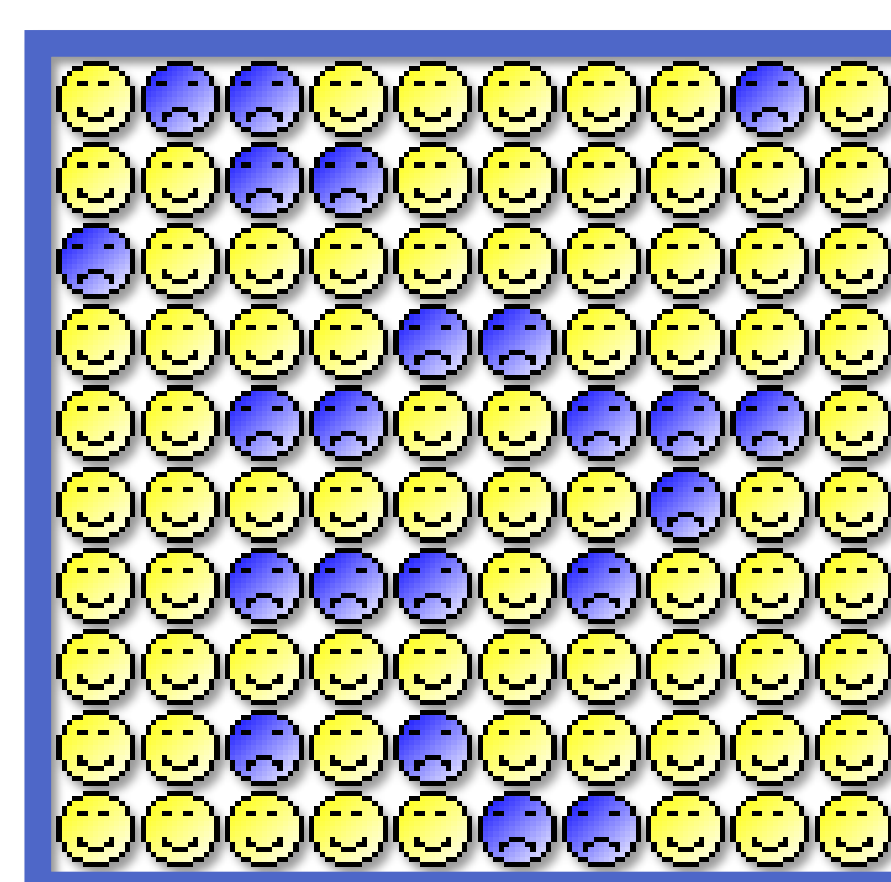


Figure 1: Illustration of a QRISK3 score (21.5% in this example), showing a person's risk of a MI or stroke in the next 10 years in an accessible visual format. By presenting information in this digestible way, patient engagement can potentially be increased.

Characteristic	Number (n=24)	Percentage (%)
Male	16	66.7%
Female	8	33.3%
Average age (range)	48.5 years	28-70 years
Ethnicity		
Black African	3	12.5%
Black Caribbean	7	29.2%
White British	12	50.0%
Other	2	8.3%
Primary Diagnosis		
Non-affective psychosis	15	62.5%
Affective psychosis	7	29.2%
Other	2	8.3%
Physical Health		
Smoker	17	70.8%
Dual Diagnosis	9	37.5%
Mean BMI (range)	29.1	20.3-48.5
Diabetes	6	25.0%
Hypertension	9	37.5%
Polypharmacy (>4 drugs)	16	66.7%
Multimorbidity*	21	87.5%

Table 1: key characteristics of inpatient rehabilitation cohort. Multimorbidity was defined as having one coexisting SMI and ≥ 1 long-term physical health diagnosis.

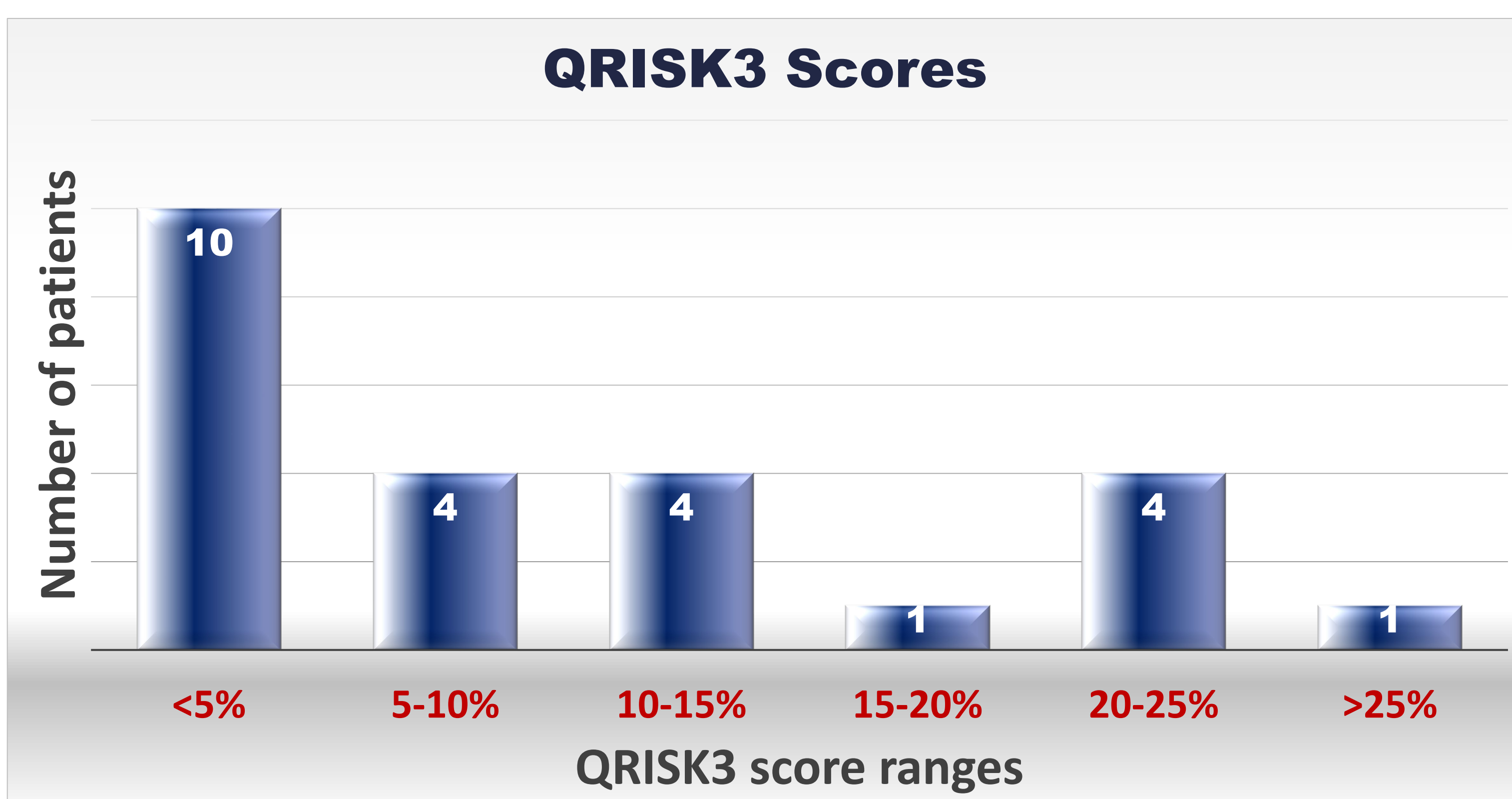


Figure 2: number of patients who have QRISK3 scores within the indicated range.

NEXT STEPS:

- While risk calculation by itself may not be clinically useful, knowing the risk factors can help target interventions. The high risk seen in our cohort merits focused interventions.
- QRISK3 is relatively easy to use and should be a standard part of ensuring integrated physical health care.
- Collaborative & coproduced care plans can drive change and needs consistent motivational approaches from staff.
- Training and supervision for staff in delivering integrated mind-body care should be a priority for rehabilitation units.
- A QI approach to measure and incrementally improve care is an effective method to reduce risks.