were quaternary referrals following failed PEG insertion. Length of stay was 5 ± 5 days. Body mass index (BMI) at diagnosis was 27 ± 5 kg/m² with BMI at PEG insertion 22 ± 4 kg/m². Mean weight change from diagnosis to insertion was $-16 \pm 10\%$. Ventilator compliance time was 3 ± 6 hours. Eighteen patients were compliant to NIV (NIV usage >4 h daily). Thirty-day mortality was 10% and 90-day mortality was 15%. Survival time since MND diagnosis for non-complaint to NIV patients (859 ± 123 days) trended to be less than those compliant to NIV (1165 ± 203) ($p=0.058$) (Figure 1).

PEG insertion in MND patients requiring NIV is safe and effective. NIV compliance in this cohort of patients who have bulbar dysfunction might affect survival.

PWE-018 DERIVATION AND VALIDATION OF A ROYAL FREE HOSPITAL GASTROSTOMY RISK SCORE

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Introduction Percutaneous gastrostomy feeding tubes are used to provide long term artificial nutrition in patients with adequate intestinal absorptive capacity. Placement is associated with low immediate morbidity; however, the early mortality rate is high. Current selection for gastrostomy placement has a significant subjective element. In consequence there is a need for a validated, objective assessment tool, based on easily accessible information, to identify the risk-benefit of gastrostomy placement on an individual basis. The aim of this study was to derive and validate a Royal Free Hospital-Gastrostomy Risk Score (RFH-GRS).

Methods Extensive demographic and clinical data were collected on the 234 patients referred for gastrostomy placement, at the Royal Free Hospital, London, between 1 January 2016 and 31 December 2017; the entire cohort was followed until death or 31 December 2017. Multivariate analysis identified age, multimorbidity (assessed using the Charlson Comorbidity Index), prognosis, and recent infection as independent predictors of survival. Four further factors were identified by experienced nutritional practitioners for inclusion in the RFH-GRS *viz.* nutritional status using the MUST score, severity of dysphagia, anti-coagulation status and anatomical suitability. Each variable was allocated an appropriate categorical score. The

maximum total score was 31 for the multivariate model and 40 for the RFH-GRS. Scores were then retrospectively allocated to the 234 gastrostomy referrals and the predictive validity for survival of the two scores compared.

Results The median (range) multivariate model score was 5 (1–11); the median RFH-GRS was 10 (2–18). The quartiles within these ranges were used to allocate patients to one of four score groups. Comparison of cumulative survival, based on these groups, showed that the RFH-GRS had superior predictive validity (Figure 1). Patients with a RFH-GRS of – have a low risk of an adverse outcome following gastrostomy placement; 6–10 a moderate risk, so they are likely to benefit; 11–14 a medium to high risk so benefits may still outweigh the risk, and ≥ 15 a high risk, making it unlikely that they would benefit from the procedure.

Conclusion The RFH-GRS is a simple, validated tool for the assessment of patients referred for gastrostomy placement. It utilises routinely collected data and hence can be easily applied.

PWE-019 PROSPECTIVE VALIDATION OF THE ROYAL FREE HOSPITAL GASTROSTOMY RISK SCORE

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Introduction Percutaneous gastrostomy tubes are widely considered a safe and effective means for providing long-term enteral nutrition. However, placement is associated with high risk of death in the weeks following insertion. The Royal Free Hospital Gastrostomy Risk Score (RFH-GRS), was designed to facilitate risk-benefit assessment of patients referred for gastrostomy (Russell-Dalton et al. *Clin Nutr* 2019; 29:252.). It allocates a categorical score to eight factors *viz.* age, prognosis, nutritional status, severity of dysphagia, anatomical suitability, anti-coagulation status, comorbidities (Charlson Comorbidity Index) and recent infection; the maximum total is 40. Scores are stratified to facilitate risk-benefit assessment *viz.* 0–5: low risk, likely benefit; 6–10: moderate risk, likely benefit; 11–14: medium-high risk, benefits may still outweigh the risk; and

Abstract PWE-018 Figure 1 Cumulative survival in 234 gastrostomy candidates, by score