Introduction:
Risk stratification of patients with acute PE helps to determine the most appropriate treatment. The European Society of Cardiology proposes the use of PESI (Pulmonary Embolism Severity Index) class to determine when reperfusion therapies (full/partial dose thrombolysis, catheter directed local thrombolysis, ECMO, unfractionated heparin or LMWH) are most appropriate. Our study aimed to determine the number of Patients eligible for reperfusion strategies and inform the likely impact on High Dependency services.

Methods:
We performed a retrospective analysis of all patients admitted to the Royal London Hospital from 1st April 2018 through 31st March 2019 with acute pulmonary embolism. Data was obtained on demographics, suspected cause and PESI score on day of admission.

Results:
Over 1 year 165 people were diagnosed with acute PE. The majority (85%, n=140) were diagnosed with CTPA. The mean age was 55.6 years old (median 55). Right Ventricular (RV) strain pattern was present in 10% (n=16). The majority of PE’s were unprovoked (39%), other causes included immobility (33%), Cancer (17%), deranged clotting (10%) and pregnancy (1%). 45 (27%) patients were PESI III/IV of these 7 (4%) had both echocardiographic evidence of right ventricular strain and elevated troponin values. 13 (8%) Patients had died at time of data collection with the majority of deaths (n=6) within the PESI V class.

Conclusion:
Over one year only a small proportion of patients (n=7, 4%) were classified as ‘Intermediate High’ risk and potential candidates for reperfusion therapies. The average age of PESI class 3 or 4 Patients was 74.8 years (median=78). Extremes of age skew the PESI score disproportionately and a number of ‘Intermediate High’ risk patients would likely not be clinically suitable for reperfusion therapies. Adoption of the ESC’s proposed treatment algorithm would therefore likely place minimal additional burden on HDU services.

References:
1. ESC 2019 Guidelines on Acute Pulmonary Embolism (Diagnosis and Management of)

Image:

Fig.1 – PESI scores for patients presenting to a central London teaching hospital with acute PE over the course of a year.