

Retrospective audit of ED attendances in intensive care patients to prognostic outcome.

SQA21

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Introduction

The aim of the audit was to assess the frequency of Emergency Department (ED) attendances before and after Intensive care and correlate this with functional decline and worsening comorbidities. Though the Covid 19 pandemic has highlighted this more starkly! the implications of prolonged ICU care and increased long term care needs is well established².

Objectives

A well-structured, comprehensive, multidisciplinary rehabilitation program during and after discharge from the hospital could improve outcomes and prevent further hospital/ED visits.

Methodology

Data was collected using the ITU admission data base for all > 72 hour ITU patient stays over a two year period of 2017-2018 and 2018-2019 in a district general hospital in the UK. Each individual patients number of same hospital ED attendances for twelve months before and after their ITU admission were reviewed and the causes for them assessed in addition to reviewing the outcome data for the similar period.

Table 1 – Length of ITU admissions.

	2017	2018
Mean Length of stay	211 hrs	197 hrs
Median Length of stay	132 hrs	135hrs
Range	72hrs – 3439hrs	72hrs – 2279hrs

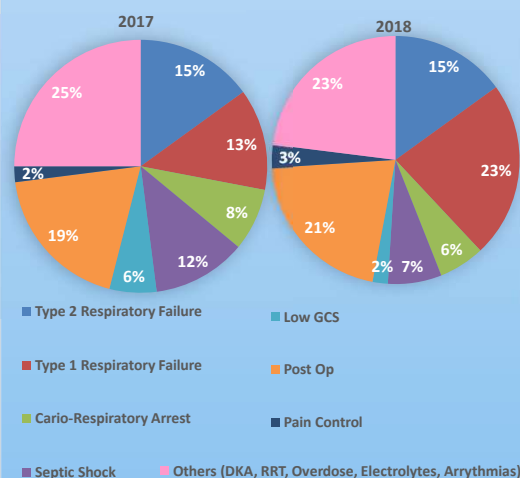


Chart 1 – Reasons for ITU admission.

Table 2 – Patient outcomes

	2017	2018
%Survived first ICU and Hospital admission	79% (327/414)	87.8% (373/425)
%Died in hospital following ICU stepdown	21% (87/414)	10.1% (43/425)
%Died with in 1 year following hospital discharge	N/A	13.8% (59/425)
%Died with in 2 years following hospital discharge	18.8% (78/414)	20.4% (87/425)
%Died by 2-years following ICU admission	40% (165/414)	30.6% (130/425)

Results

During the period of 2017-2018 and 2018-2019 a total of 817 and 803 number of patients were admitted to ICU of which 414 and 425 patients spent more than 72 hours on the ICU respectively (median= 133.5 hours). Of the 839 ITU admitted, 700(83.4%) survived ICU stay. 165 (23.6%) of the 700 patients died in subsequent 2 years of ITU discharge. The two year survival rate was 65%.

The most common ITU admissions reason was Post-operative monitoring (20%) followed by Type 1 respiratory failure (18%) and Type 2 respiratory failure (15%). The median ED attendance was 0 (Range 0 to 29, mean 0.985, S.D 3.985) in the 17-18 and 0 (Range 0 to 24, mean 1.153, SD 2.154) in the 18-19 cohort in the 12 months prior to ITU admission while the median ED attendance was 0(Range 0 to 15, mean 0.980, S.D 4.4) in the 17-18 and 72% for 18-19 of ED reattendances following prolonged ITU stay were due to reasons similar to ITU care. Of the 445 patients with no prior ED attendance in 1 year, 168 or 38% (range 1 to 14) had at least one ED attendance in the 12 months following ITU discharge. The remaining 394 patients with at least one ED attendance prior to ICU, 185 or 47% (1 to 15 Range) had ED attendance 12 months following their ITU discharge.

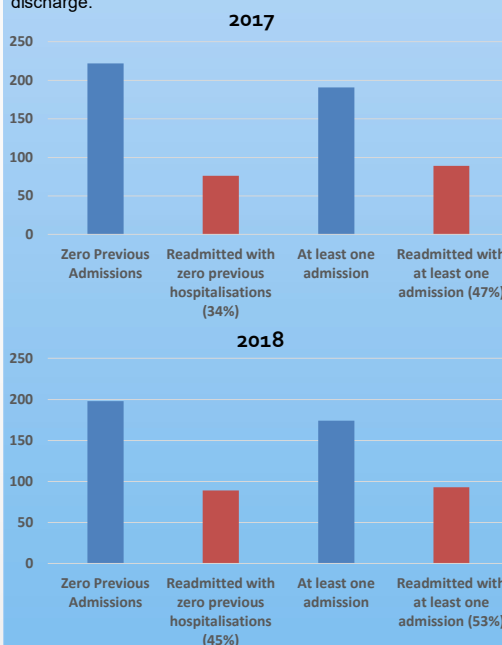


Chart 2 – Bar Chart showing number of patients readmitted to ED post ITU admission.



Image 1 and 2: COVID survivor with newborn child and ITU nurses (Left). COVID survivor with visiting family (Right). (Source: Walsall Manor Hospital Comms Department)

Conclusions

The results show that ITU admitted patients consume significant health resources before and after their ITU stay. Patients with no prior ED attendances before ITU admission also reattended in substantial numbers. The majority of these attendances were related to their initial reason for ITU admission. A Comprehensive rehabilitation program both in hospital and following hospital discharge could improve patients outcomes, reduce stress on emergency services and improve patient experience. A rehab service was implemented and has become pivotal as the evidence for long Covid has become obvious during the pandemic³.

References

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Conflicts of interest (Max 100 words): Two of the contributing authors are currently implementing a rehabilitation program for all patients discharged from long term ITU admission. This study provides preliminary results that will determine the effectiveness of said program when further data is collected.