Title: Central Emergency Department, Rescue and Acute Intensive Care Medicine (ZRI)

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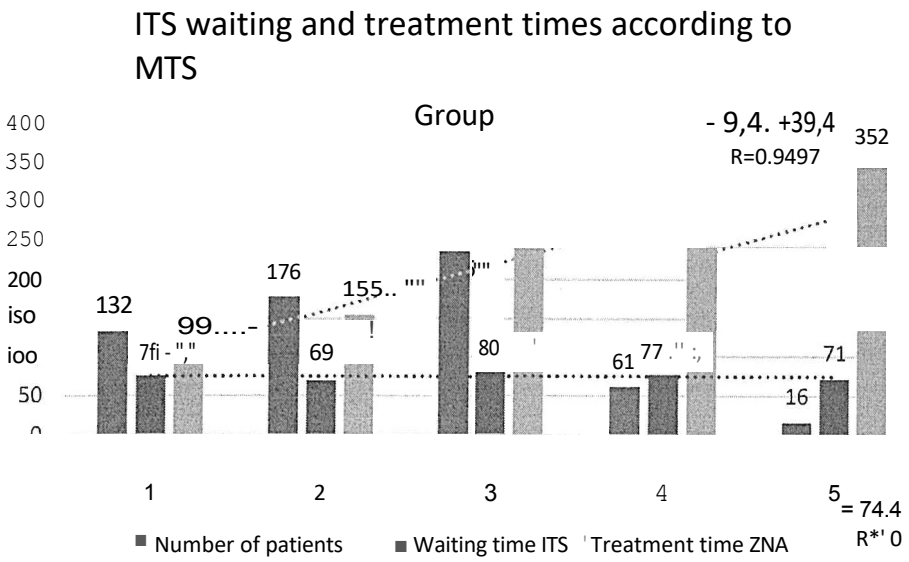
Introduction: In 2019, a total of 10642 treatments with subsequent further inpatient treatment were admitted by the CSSD. 1440 patients (14%) received further treatment on the ITS. Of the 1430 ITS treatments, 600 patient treatments (41%) resulted in documented waiting times for an ITS bed. However, this is only the proportion that was indicated in the PTS as waiting for a ward bed, as there are always waiting times for transfer during an ITS admission. The mean value of all bed waiting times is 78+66 minutes.

Results: With a waiting time of 78+66 minutes, the ITS transfer period is significantly longer than the waiting time cluster of 60 minutes specified by the GBA. 298 patients (49.6%) were from the ITS within the specified hour. 302 patients (50.3%) spend more than one hour after registration in the OR (max. 417 minutes). The average time to decision for ITS treatment was 13 minutes for all patients. The average duration of treatment of ITS patients in the CICU was 190 minutes per patient and a total of 271,133 minutes (4519 hours or 188 days). In relation to a working year of 225 days, the CICU realized 84% of intensive care treatments.
The picture shown in Table 1 emerges we look at the breakdown by treatment category. Immediate treatment (MTS category 1) accounts for 132 patient treatments. 42% (n=55) of patients wait an average of 75 minutes for a treatment bed. In relation to the internal ZNA treatment time (13 minutes), half of all life-threatening patients spend a total of 99 minutes in the ZNA. In MTS category 2 (very urgent treatment), 176 patients waited an average of 69 minutes for an ICU treatment slot after being treated in the ICU for a total of 155 minutes. In MTS category 3, 235 patients waited 80 minutes for an ITS bed with a total ZNA treatment time of 239 minutes. In MTS category 4, 61 patients waited an average of 77 minutes for a treatment slot after 243 minutes of treatment. From category 5, 16 patients were admitted to the ITS after 71 minutes waiting time for an ITS bed.

Table 1: ITS takeover times by urgency

MTS category	Number of patients	Waiting time ITS	Treatment time ZNA
1	132	75	99
2	176	69	155
3	235	80	239
4	61	77	243
5	16	71	352

Figure 1: ITS waiting and treatment times after MTS in the ZNA



The image of ITS waiting and treatment times shows that the ITS waiting time is independent of the MTS categorization. Furthermore, it can be seen that the treatment times with the MTS categorization within the ZNA treatment. From the function y=59.9x+39.4 it can be derived with a coefficient of determination of R^2=0.95 that the ZNA treatment time per MTS category is a multiple of one hour. If the treatment time is taken into account, it results that 251 patients (17.6%) are admitted to the ITS in the period from 22:00 to 06:00 mii en 65s patients (flß 1 %) mii°°en be admitted in a 7.eit''on 0°:00 h hi° 1 4 00 h and "".0 ITc P tiert n (36.4%) from 15:00 to 21:00 h. The average treatment time of ITS patients in the ZNA is 190 minutes per patient. 82.5% of ITS patients are between 07:00 and 21:00. Each year, 27,113,33 minutes, i.e. 188 days of intensive care, are provided in the ICU.

Figure 2: ITS recording times

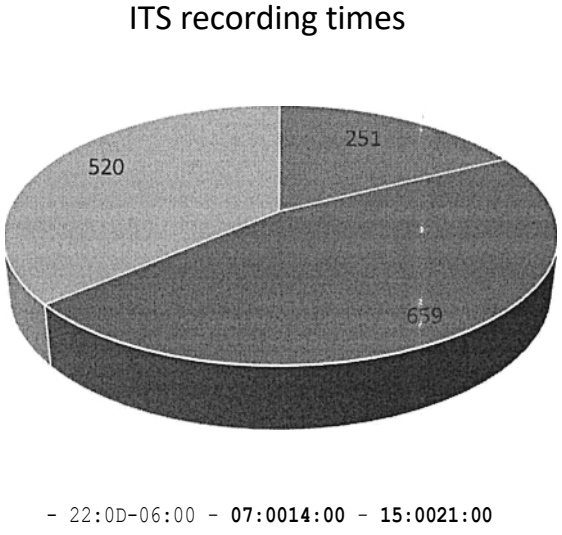
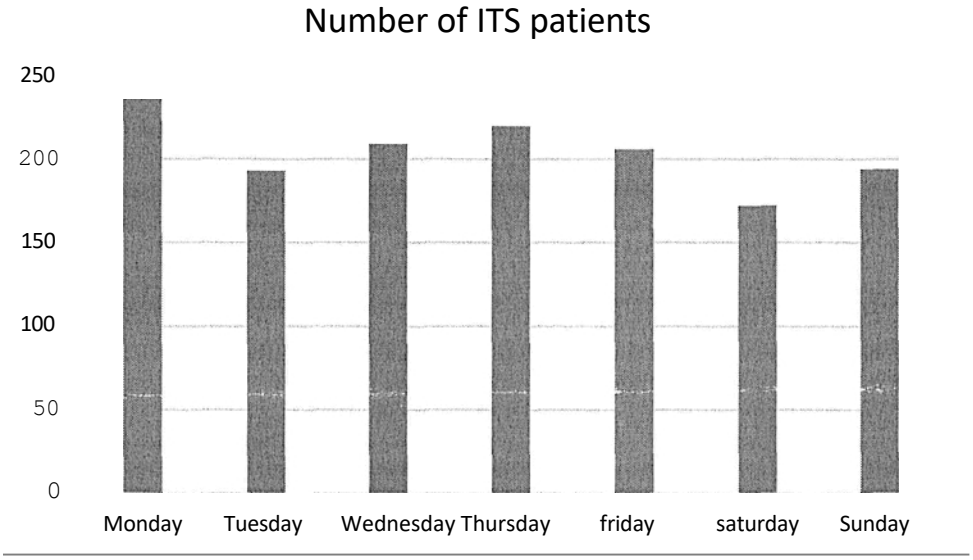


Table 2: Weekday distribution

Weekday	Number of ITS patients
Monday	236
Tuesday	193
Wednesday	209
Thursday	220
Friday	206
Saturday	172
Sunday	194

Figure 3: Admission days of ITS patients



Discussion: The aim of the analysis was to review the specifications of the Joint Federal Committee (JCC) with regard to the circumstances of the transfer of intensive care patients from the Central Emergency Department (CED). With an average length of stay for all intensive care patients of 78166 minutes, the recommendation of the GBA 2 for transfer of 60 minutes is generally not achieved. Remarkably, the average waiting time (y=74.4) for intensive care treatment does not change according to the Manchester Triage System (MTS) criteria. However, with a high coefficient of determination (R^2=0.95), the length of stay of intensive care patients in the emergency room changes one hour per MTS category. The majority of intensive care admissions (82.5%) take place in the ICU between 07:00 and 21:00 and on weekdays (Mon.-Fri.) with a median of 206 admissions per day.
It can therefore be concluded that the ZNA should be expanded to include an intensive care treatment capacity and treatment strategy in order to meet the requirements of the GBA. In order to cope with the required GBA time and to utilize the intensive care expertise of the ZNA, I the direct admission of patients requiring intensive care in a Central Emergency Department - Rescue Medicine - Intensive Care (ZRI) unit.

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Project proposal: As it is statistically calculated that 4 patients per day have to be transferred to the ITS ward, the 1GU patients could be transferred after intensive care stabilization and treatment in the

be transferred to the ITS between 22:00 and 06:00, unless you have already been transferred to a normal ward after ZNA treatment.

In summary: The GBA ITS transfer time from indication is not achieved. Potentially endangered patients are not transferred any faster than non-critically ill patients requiring intensive care treatment. at the volume of ICU patients, most of them are admitted on weekdays between 0700 and 14:. This is where the ZRI concept could best be to fulfill the GBA requirements.