Conclusions: This study shows that a prolonged ED-ICU time is associated with increased ICU and hospital mortality in patients with higher Apache IV probabilities. Strategies aiming at rapid identification and transfer of the sickest patients to the ICU might reduce in-hospital mortality.

Table 1 (abstract P307). Baseline characteristics

Characteristics	All patients (n=14,787)	
Age, years, median[IQR]	59	[45-71]
Male, gender, n.(%)	9,179	(62%)
Apache IV predicted mortality, median[IQR]	0.16	[0.05-0.50]
ED-ICU time, hours, median[IQR]	2.0	[1.3-3.3]
ICU LOS, days, median[IQR]	1.7	[0.7-4.3]
ICU mortality, n (%)	2,682	(18.1%)
Hospital mortality, n (%)	3,284	(22.2%)

IQR, interquartile range; ED-ICU time, Emergency Department to ICU time; ICU, Intensive Care Unit; LOS, length of stay

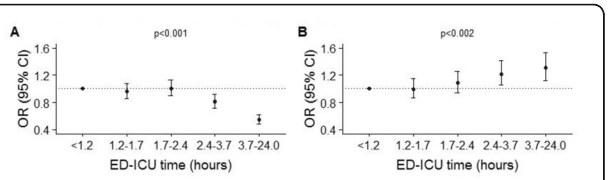

Fig. 1 (abstract P307). Odds Ratios for hospital mortality per lenght of stay in the Emergency Department. (1A) Crude (1B) Adjusted for Apache IV probability

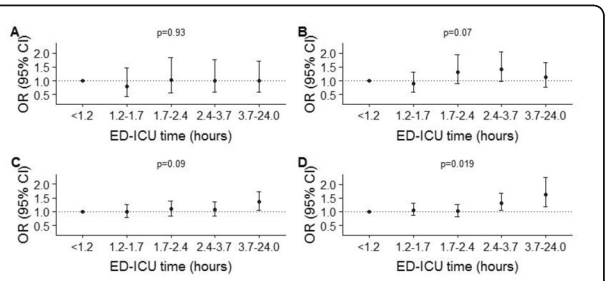

Fig. 2 (abstract P307). Odds Ratios for hospital mortality per lenght of stay in the Emergency Department. (2A) Association between ED-ICU time and Apache IV probability <10.5% (2B) Association between ED-ICU time and Apache IV probability 10.5-25.6% (2C) Association between ED-ICU time and Apache IV probability 25.7-60.9% (2D) Association between ED-ICU time and Apache IV probability >60.9%

P308

Reliability and validity of the SALOMON algorithm: 5-year experience of nurse telephone triage for out-of-hours primary care calls

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Critical Care 2019, **23(Suppl 2):**P308

Introduction: Due to the persistent primary care physicians (PCP) shortage and their substantial increased workload, the organization of PCP calls during out-of-hours periods has been under debate. The SALOMON (Système Algorithmique Liégeois d'Orientation pour la Médecine Omnipraticienne Nocturne) algorithm is an original nursing telephone triage tool allowing to dispatch patients to the best level of care according to their conditions [1]. We aimed to test its reliability and validity under real life conditions.
Methods: This was a 5-year retrospective study. Out-of-hours PC calls were triaged into 4 categories according to the level of care needed: Emergency Medical Services (AMU), Emergency Department visit (MAPH), Urgent PCP visit (UPCP), Delayed PCP visit (DPCP). Data recorded included patients' triage category, resources and potential redirections. More precisely, patients included into the UPCP + DPCP cohort were classified under-triaged if they had to be redirected to an Emergency Department. Patients from the AMU+MAPH cohort were considered over-triaged if they did not spend at least 3 resources, 1 emergency specific treatment or any hospitalization.
Results: 10207 calls were actually triaged using the SALOMON tool, of which 19.1% were classified as AMU, 15.7% as MAPH, 62.8% as UPCP and 2.1% as DPCP (Fig 1). As concerns the AMU+MAPH cohort, the triage was appropriate in 85.3% of the calls, with an over-triage rate of 14.7%. As concerns the UPCP + DPCP cohort, 97.1% of the calls were accurately triaged and only 2.9% were under-triaged. SALOMON sensitivity reached 93.9% and its specificity 92.5%.
Conclusions: These results indicate that SALOMON algorithm is a reliable and valid nurse telephone triage tool that has the potential to improve the organization of PCP out-of-hours work.

Reference

1. Brasseur E et al. Crit Care 2015, 19(Suppl 1):P406.

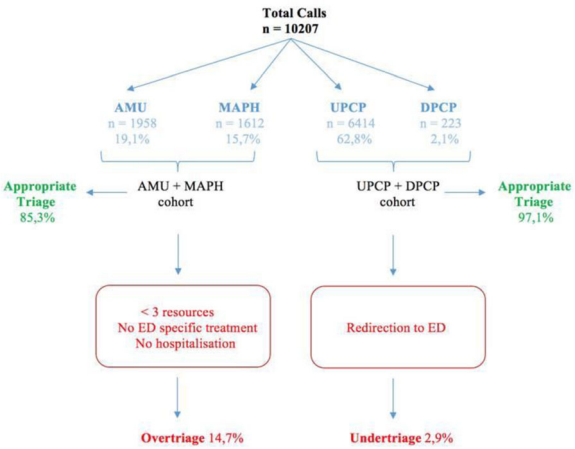

Fig. 1 (abstract P308). Distribution of different calls, their triage using the SALOMON algorithm and the inappropriate triages (over and undertriages) based on the preselected criteria

P309

Advanced triage for self-referrals in the emergency department: the PERSEE algorithm

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Introduction: Inappropriate visits to the Emergency Department (ED), such as patients manageable by a primary care physician (PCP), have been reported to play some role in the ED crowding [1]. Indeed, non-urgent patients directly managed by PCPs could reduce ED workload [2]. Triage and diversion to alternative care facilities, eventually co-located within the ED, could offer a solution [3] provided

the availability of a reliable triage tool for their early identification. We created a new triage algorithm, PERSEE (Protocoles d'Evaluation pour la Réorientation vers un Service Efficient Extrahospitalier) and tested its feasibility, performance and safety.
Methods: After initial evaluation with a 5-level ED triage scale [4], ambulatory self-referred patients classified as level 3 or below benefited from a simulated triage with PERSEE identifying 2 categories of patients: ED Ambulatory patients and primary care (PC) treatable patients. We collected patients data and resources. Patients requiring less than 3 resources, no specific emergency treatment and no hospitalization were considered as manageable in a PC facility.
Results: 1999 patients were included in the study of whom 66.9% were self-referred (Fig 1). Among those self-referrals, 58.6% were triaged as level 3 or below. 38.9% patients were triaged as Ambulatory patients of whom 10% were as PC treatable. We noted a redirection rate of 10% of the global visits or 15% of the self-referrals, an error rate of 7%, a sensitivity of 24.6% and specificity of 97.6%.
Conclusions: Using advanced ED triage algorithm in addition to classical ED triage might offer interesting perspectives to safely divert self-referrals to PC facilities and, potentially, reduce ED workload.

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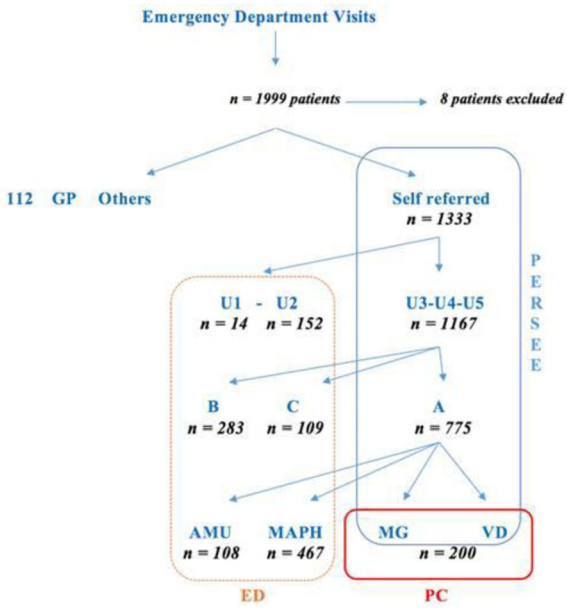

Fig. 1 (abstract P309). Distribution of the self-referred cohort using the PERSEE Algorithm

P310

Analysis of relationship between number of medical procedure and staying time in the prehospital care scene. Research in Japanese air ambulance (Doctor-Heli)

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Critical Care 2019, **23(Suppl 2):**P310

Introduction: Generally, prehospital medical provider should minimize staying prehospital scene to reach the patient to definitive care as soon as possible in prehospital medical activity. In addition, Some textbook and report saids that medical provider minimize the number of procedure or limit minimum requirement procedure because unnecessary procedure may extend the staying time in prehospital scene. However, there are few studies evaluating this hypothesis and that this "extension is significant or not. Therefore, we perform this study.
Methods: We evaluated the operated air ambulance(Doctor-Heli) case from 1st April 2015 to 31st March 2018, in Gifu University Hospital using our mission record. We evaluated about time from landing to ready for taking off(activity time), operation doctor, mission category (i.e. trauma), number of procedure in the each activity and work load. We only focused on prehospital care and exclude transportation from hospital to hospital . In addition, we exclude the case which are not suitable for analysis.
Results: 1299 cases were operated in these period. 511 cases were suitable for analysis. Average activity time in prehospital scene was14.32±6.09. There was weak correlation between the number of procedure and activity time. (r=0.3452) The length of the activity time did not depend on mission category. If the doctor perform 6 and over procedures, staying time was 7minutes longer, this was significantly longer than that of under 5 and under procedures.
Conclusions: We confirmed that we have to minimize the number of procedure or limit minimum requirement procedure in prehospital scene. And our result suggest we may have to limit appropriate number of procedures.

P311

Prevalence of organ failure and mortality among patients in the emergency department

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Introduction: Organ failure is a critical condition, but the prevalence is largely unknown among unselected emergency department (ED) patients. Knowledge of demographics and risk factors could improve identification, quality of treatment, and thereby improve the prognosis. The aim was to describe prevalence and all-cause mortality of organ failure upon arrival to the ED.
Methods: This was a cohort-study at the ED at Odense University Hospital, Denmark, from April 1, 2012 to March 31, 2015. We included all adult patients, except minor trauma. Organ failure was defined as a modified SOFA-score $\geq$ 2 within six possible organ systems: Cerebral, Circulatory, Renal, Respiratory, Hepatic, and Coagulation. The first recorded vital, and laboratory values were extracted from the electronic patient files. Primary outcome was prevalence of organ failure; secondary outcomes were 0-7-day and 8-365-day mortality.
Results: Of 70,399 contacts 52.1% were female and median age 62 (IQR 42-77) years. The prevalence of new organ failure was 11.8%, individual organ failures; respiratory 4.9%, circulatory 3.0%, cerebral 2.3%, renal 1.7%, hepatic 1.4%, and coagulation 0.6%. The 0-7-day and 8-365-day all-cause mortality was 11.7% (95% CI: 10.9-12.6) and 19.3% (95% CI: 18.2-20.4), respectively, if the patient had new organ failures at first contact in the observation period, compared to 1.4% (95% CI: 1.3-1.5) and 6.6% (95% CI: 6.4-6.9) for patients without. Seven-day mortality ranged from hepatic failure, 5.6% (95% CI: 4.0-7.5) to cerebral failure, 33.3% (95% CI: 30.4-36.2), and the 8-365-day mortality from cerebral failure, 13.2% (95% CI: 11.2-15.4 to renal failure, 26.7% (95% CI: 23.6-29.9).
Conclusions: New organ failure is frequent and serious, with a prevalence of 11.8% and a one-year mortality of 31% with wide variation according to type of organ failure.