

investigate the proportion of patients with acid-base outlier values in triage groups and investigate if patients could benefit from altered triage group allocation.

**Method** Patients admitted to the emergency department were allocated to green, yellow, orange and red triage groups based on vital signs. VBG samples were collected and converted to aVBG with v-TAC software. Using hierarchical clustering, patients with combined outlier values of pH, pCO<sub>2</sub> and bicarbonate, were identified in green, yellow and orange triage groups.

**Results** In this study 586 patients were included. In green, yellow and orange triage groups 26 of 222 (11.7%), 36 of 191 (18.8%) and 18 of 155 (11.6%) patients, respectively, were identified with combined pH, pCO<sub>2</sub> and bicarbonate outlier values, compared to the specific triage group norm. Although, congruency was observed between severity of acid-base conditions and triage score, some patients presented acid-base abnormality that required more expedient treatment than the allocated triage group suggested.

**Conclusion** Substantial proportions of patients with outlier values of pH, pCO<sub>2</sub> and bicarbonate was clearly identified using routine aVBG analysis. Some patients with severe acid-base conditions could benefit from altered triage group allocation.

## REFERENCES

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## REGIONAL VARIATIONS IN AED DEPLOYMENT, ACCESSIBILITY AND EARLY DEFIBRILLATION: A NATIONWIDE STUDY

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**Aim** Current resuscitation guidelines recommend early defibrillation by publicly accessible automated external defibrillators (AEDs). However, little is known on regional variations in AED deployment, 24/7 accessibility and bystander defibrillation on a nationwide level.

**Method** We identified all publicly available AEDs registered in the Danish AED network (2007–2016). AED density, type of location, 24/7 accessibility and bystander defibrillation were examined according to regional differences in Denmark.

**Results** Of 17,106 AEDs registered nationwide (=297.7 AEDs/100,000 inhabitants), the largest quantity and density of AEDs were in The Capital Region (n=5,120, 29.9%), 110.8 AEDs/100,000 inhabitants/1000 km<sup>2</sup>, followed by Southern Denmark (n=4,082, 23.9%), 27.4 AEDs/100,000 inhabitants/1000 km<sup>2</sup>,

Central Jutland (n=3,644, 21.3%), 21.5 AEDs/100,000 inhabitants/1000 km<sup>2</sup>, Zealand (n=2,269, 13.3%), 37.8 AEDs/100,000 inhabitants/1000 km<sup>2</sup> and Northern Jutland (n=1,991, 11.6%), 43.0 AEDs/100,000 inhabitants/1000 km<sup>2</sup>. Northern Jutland had the highest proportion of 24/7 AED accessibility (50.2%), followed by Southern Denmark (47.5%), Zealand (44.5%), Central Jutland (41.0%) and The Capital Region (29.1%). The corresponding public defibrillation rates were 12.5%, 23.5%, 9.7%, 13.5% and 11.8%, respectively. ‘Companies/offices’ were the most frequent location for AED placement in all five regions, however, with a low 24/7 accessibility ranging from 11.4% to 31.3%.

**Conclusion** In Denmark, we found a marked difference in regional AED density ranging from 21.5 to 110.8 AEDs/100,000 inhabitants/1000 km<sup>2</sup>, as well as 24/7 accessibility ranging from 29.1% to 50.2%. The most frequent location of AED placement for all regions was ‘Companies/offices’, which generally had low 24/7 accessibility. Finally, public OHCA defibrillation rates ranged from 9.7% to 23.5%.

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## SELF-RATED WORRY PREDICTS HOSPITALISATION IN OUT-OF-HOURS SERVICES TELEPHONE TRIAGE

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**Aim** Telephone-triage poses a challenge in estimating urgency and determining the best response in acute health care. Lack of visual cues, vague symptom description, interpretation of symptoms, and spoken word contribute to the complexity.<sup>1</sup> The aim of the study was to include information that would enrich the telephone-triage with a measure of the callers’ subjective feeling of urgency defined as ‘degree-of worry’ (DOW). We tested the hypothesis that high DOW would be associated with hospitalisation within 48 hours.

**Method** A prospective cohort study was performed between 24.01–9.02 2017. Callers rated their DOW on a 1–5 scale (1=minimum worry, 5=maximum worry) before transferred to a call-handler. Length of hospital stay was obtained from National Patient Register. The association between DOW and hospitalisation was assessed using logistic regression.

**Results** Of 11 413 calls to the helpline, 581 individuals (5.1%) were hospitalised. Most of the hospitalised individuals (n=374, 64.4%) presented a high DOW (DOW 4–5). A high DOW had an odds ratio for being hospitalised of 5.38 (95% CI: 4.05 to 7.15) compared to those with a low DOW (DOW 1–2). Medium DOW (DOW 3) had intermediate odds ratio of 2.24 (95% CI 1.65 to 3.06). We observed this in all age groups, both genders, all levels of comorbidity, regardless if the caller was the patient or a close relative/friend.