improvements although highly qualified physicians carry out the service.

REFERENCES

Conflict of interest None declared.

Funding None declared.

27 IMPLEMENTATION, TEMPORAL CHANGES, AND FOLLOW-UP OF A NATIONWIDE AED-NETWORK
LIM Karlsson*, 1CM Hansen, 1M Wissenberg, 2SM Hansen, 3FK Lippert, 4S Rajan, 5K Krögholm, 6S Møller, 1GH Glasius, 2TQ Pedersen, 4F Folke. 1Department of Cardiology, Copenhagen University Hospital Gentofte, Denmark; 2Departments of Clinical Epidemiology and Cardiology, Aalborg University Hospital, Denmark; 3Emergency Medical Services Copenhagen, the Capital Region of Denmark; 4National Institute of Public Health, University of Southern Denmark, Copenhagen

Aim To describe the temporal development of automated external defibrillator (AED) deployment in Denmark according to type of AED location and accessibility.

Methods We collected information on all AEDs registered in the nationwide Danish AED network, 2007–2015, including type of AED location, accessibility 24 hours a day (24/7), and year of deployment.

Results The number of registered AEDs available for public access defibrillation increased from 140 in 2007 to 12 666 in 2015. In total, 14,390 AEDs were registered during the study period. Of these, most AEDs were placed in companies/offices (29.3%, n=4,213), followed by school/education facilities (12.6%, n=1,819), and sport facilities (10.2%, n=1,464) whereas few AEDs were deployed in residential areas (6.9%, n=999) and transportation facilities (1.0%, n=147). In 2007 and 2008, most AEDs were placed in sports facilities but then declined. From 2009 and forward, most AEDs were placed in companies/offices, whereas deployment in residential areas showed a temporal increase. AED accessibility 24/7 increased from 11.4% in 2007 to 35.2% in 2015, with residential areas having the highest 24/7 accessibility (83.2%, n=758), followed by churches/community centres (74.5%, n=301), and transportation facilities (69.0%, n=875). Despite AED deployment was highest in companies/offices only 14.8% (n=542) of these AEDs were accessible 24/7.

Conclusion The number of public available AEDs in Denmark has markedly increased from 2007–2015, with companies/offices, school/education facilities, and sport facilities as most frequent places of AED deployment. However, only 14.8% of AEDs placed at companies/offices had 24/7 accessibility.

Conflict of interest None declared.

Funding Ministry of Health Welfare and Sports, the Netherlands

28 THE DIFFERENCE BETWEEN PHYSICIAN ASSISTANTS AND AMBULANCE NURSES AS SOLO EMERGENCY CARE PROVIDERS IN EMS, A CROSS SECTIONAL STUDY
S Berben*, 1A Bloemhoff, 2L Schoonhoven, 3A de Kreek, 4P van Gruusven, 5M Laurant.
1Eastern Regional Emergency Healthcare Network, Radboud University Medical Centre, Nijmegen, the Netherlands; 2Faculty of Health Sciences, University of Southampton, Southampton, UK; 3Ambulance Emergency Medical Service Veiligheids en Gezondheidsregio Gelderland-Midden, Arnhem, the Netherlands; 4Ambulance Emergency Medical Service Veiligheidsregio Gelderland-Zuid, Nijmegen, the Netherlands; 5Scientific Institute for Quality of Healthcare, Radboud University Medical Centre, Nijmegen, Netherlands

Aim The aim of the study is to compare the assessment, treatment, referral, and follow up contact with the dispatch centre of emergency patients treated by the physician assistant (PA) and ambulance nurse (RN) in emergency medical services (EMS) in the Netherlands.

Methods In a cross-sectional document study in two EMS regions we included 991 patients, treated by two PAs (n=493) and 2.3 RNs (n=498). Data were drawn from predefined and free text fields in the electronic patient records and analysed using descriptive statistics. We used χ2 and Mann-Whitney U tests to analyse differences in outcome of care. Statistical significance was assumed at a level of p<0.05.

Results In line with the medical education, PAs used a medical diagnostic approach (16%, n=77) and an exam of organ tract systems (31%, n=155). PAs consulted more often other medical specialists (33%) than RNs (17%) (χ2=35.5, p<0.0001). PAs referred less patients to the general practitioner (GP) or emergency department (ED) (50%) compared to RNs (73%) (χ2=52.9, p<0.0001).

Conclusion PAs seemed to operate from a more general medical perspective. They referred significantly less patients to the ED.

REFERENCES
2. Afiiliation of presenting author is Eastern Regional Emergency Healthcare Network, Radboud University Medical Centre, Nijmegen, the Netherlands

Conflict of interest None declared.

Funding Ministry of Health Welfare and Sports, the Netherlands

29 INVESTIGATING THE POPULATION CHARACTERISTICS, PROCESSES AND OUTCOMES OF PRE-HOSPITAL PSYCHIATRIC AND SELF-HARM EMERGENCIES IN SCOTLAND: A NATIONAL RECORD LINKAGE STUDY
1ED Duncan*, 1C Best, 3N Dougall, 1S Skar, 2D Fitzpatrick, 1Evans, 3AC Corfield, 1G Goldie, 1M Maxwell, 1H Snooks, 1C Stark, 1C White, 3W Wojcik. 1University of Strirling; 2Edinburgh Napier University; 3Scottish Ambulance Service; NHS Greater Glasgow and Clyde; 4Mental Health Foundation; 5Swarovski University; 6NHS Highland; 7NHS Lothian

Aim To investigate the demographic characteristics, care pathways, and clinical and service outcomes of people who present to ambulance services with a psychiatric or self-harm emergency.
Methods We conducted a retrospective cohort study of patients attended by the Scottish Ambulance Service in 2011 with ambulance clinician attendance codes relating to ‘psychiatric emergency’ or ‘self-harm’. Patients resident in Scotland and ≥16 years on first contact were included. We used NHS Scotland’s Unscheduled Care Data mart (1) to link data from: – the ambulance service; emergency departments (ED); general and psychiatric inpatient hospital admissions episodes; and death records.

Results There were 9014 calls from 6802 people. Slightly more males (n=4708, 52%) than females (n=4306, 48%) were attended. Most were discharged from ED with no known follow-up (n=4566; 51%). Some were left at home (n=1003 attendances, 11%). Almost half of the people (n=3238, 48%) made at least one repeat call. People who self-discharge from ED were more likely to have another ambulance attendance for psychiatric emergency/self-harm within the same year (Pearson chi square=5.24, p=0.02). Two hundred and seventy-nine (4%) people died within the study period, 97 (35%) were recorded as suicide. Ethical approval (NRES 15/EM/0260) and other data approvals were received.

Conclusion While linked data analysis may not identify all relevant cases, it provides important information to guide the development and evaluation of evidence-based interventions. Ambulance service and ED are missing opportunities to improve outcomes for people who experience a psychiatric emergency or who self-harm. New interventions could lead to decreases in the number of suicides, episodes of self-harm and levels of patient distress; and ambulance and ED service use.

REFERENCE
1. Information Services Division (NHS Scotland) (2016) Unscheduled Care Data mart Background Paper. Accessible at http://www.iscscotland.org/Health-Topics/Emergency-Care/Patient-Pathways/unscheduledcare_background.pdf Accessed on 13/01/17

Conflict of interest None declared.
Funding Scottish Government, Chief Scientists Office

30 A STUDY OF THE PREVALENCE OF IMPAIRED AWARENESS OF HYPOGLYCAEMIA IN PEOPLE WHO HAVE HAD A SEVERE HYPOGLYCAEMIC EMERGENCY AND BEEN ATTENDED BY THE AMBULANCE SERVICE

E Duncan*, D Fitzpatrick, J Evans. University of Stirling

Aim To investigate the prevalence of Impaired Awareness of Hypoglycaemia in patients who require ambulance service attendance due to severe hypoglycaemia.

Methods We undertook a national cross-sectional survey of the prevalence of Impaired Awareness of Hypoglycaemia (IAH). An a priori target sample size of 415 was set to allow estimation of proportions of IAH within a 5% margin of error (99% CI). From January–June 2016, patients (>16 years) attended by the Scottish Ambulance Service due a Diabetes related emergency with a blood glucose <4 mmol/L were identified as potential participants. A questionnaire with two standardised IAH measures1,2 was posted to potential participants within a month of their severe hypoglycaemic event. Consent to participate was assumed through questionnaire return. Ethical approval was received from the National Research Ethics Service (15/EE/0383).

Results Five hundred and ninety-two questionnaires were returned. The prevalence of impaired awareness of hypoglycaemia in among participants as measured using the two standardised measures was 53% and 57% respectively.

Conclusion IAH is considerably more prevalent among people who have a severe hypoglycaemic emergency and call the ambulance service than in the general Diabetic population, where prevalence is 25%.1 This knowledge will assist in the development of an intervention to reduce hypoglycaemic emergencies and may lead to improved outcomes and cost savings.

REFERENCES