like disasters. The LRSM design now supports engagement with lay responders very early in post-event period, and informed by continual findings.

Conclusion The LRSM provides a structured framework to capture information about witnessing a SCA from the lay-responders involved the role they played, actual clinical records, and to identify areas of support for lay-responder's residual mental health. It potentially goes beyond cardiac arrest situations and may prove helpful to psychological first aid providers and other public health organisations identifying and referring people to appropriate resources.

Conflict of interest None

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28 HEALTH ECONOMIC ANALYSIS OF LOW-DOSE METHOXYFLURANE (LDM) FOR THE TREATMENT OF MODERATE-TO-SEVERE TRAUMA PAIN IN SWEDEN

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Aim Inadequately treated trauma pain can lead to prolonged and unnecessary patient suffering, as well as lengthen hospital stay.^{1,2} LDM (Penthrox®) is an inhaled analgesic indicated for emergency relief of moderate-to-severe pain in conscious adult patients with trauma and associated pain.³ The aim of this study was to assess the impact of introducing LDM in the pre-hospital setting for a European healthcare system.

Method A health economic model was developed from the Swedish healthcare system perspective to evaluate outcomes and resource use associated with LDM vs standard of care (morphine injection, fentanyl nasal spray and ketamine injection) over a 5 year time horizon. Model inputs included time to first pain medication treatment, drug acquisition, administration and equipment costs, practitioner rates and adverse event costs. Inputs were derived from published data supplemented by the results of a retrospective chart review and physician survey.

Results Based on a national Swedish population of ~10 M individuals, the model estimated that ~6 00 000 patients would be eligible for LDM treatment in Year 1. Introducing LDM at a 1% uptake rate in Year 1, increasing 1% annually, was estimated to result in the avoidance of ~15,600 hours of moderate-to-severe pain over 5 years, allowing for the treatment of an additional ~43 000 patients for moderate-to-severe pain. A modest cumulative 5 year budget impact increase is estimated at SEK~1 M.

Conclusion Introducing LDM as a treatment for moderate-to-severe trauma pain in the pre-hospital setting may result in fewer hours of patient pain and more patients treated at a modest budget increase.

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Conflict of interest None

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29 OUT-OF-HOSPITAL CARDIAC ARREST IN PATIENTS WITH PSYCHIATRIC DISORDER – CHARACTERISTICS AND OUTCOMES

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Aim Survival after out-of-hospital cardiac arrest (OHCA) has increased in several countries following improvements in pre-hospital OHCA-management. We investigated overall and temporal changes in characteristics and outcomes in OHCA-patients with previous psychiatric disorder.

Method We identified adult patients with OHCA of presumed cardiac cause from the Danish Cardiac Arrest Registry from 2001 through 2014. Using multivariable logistic regression we calculated odds ratio (OR) for cardiopulmonary resuscitation (CPR), survival upon hospital arrival, 30 day and 1 year survival after OHCA in patients with and without a history of psychiatric disorder identified by discharge diagnosis up to 10 years before OHCA.

Results Of 28,955 OHCA, 4037 (13.9%) had a known psychiatric disorder. Psychiatric patients were younger, less likely to have bystander-witnessed OHCA (44.1% vs 51%) and shockable heart rhythm (14.8% vs 27.1%), but same degree of arrest in private home (64.5% vs 64.8%) and estimated time interval to first-rhythm-analysis by EMS-crew (12 min) compared to non-psychiatric OHCA-patients. In fully-adjusted models, psychiatric patients had the same probability of receiving bystander CPR (OR 0.93 [95% confidence interval, 0.83–1.02]), but lower probability of survival upon hospital arrival, 30 day and 1 year survival: OR 0.79 [0.71–0.89], 0.54 [CI: 0.46 to 0.64] and 0.49 [0.41–0.59], respectively. Temporal trends showed that the gap in 30 day and 1 year survival between psychiatric and non-psychiatric OHCA-patients became evident after 2007.

Conclusion Survival following OHCA among psychiatric patients is considerably lower compared with non-psychiatric OHCA-patients and the gap seems to widen over time despite the recent efforts to improve OHCA-management.

Conflict of interest None

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30 WHEN EVALUATING THE LEVEL OF LACTATE: COULD VENOUS BLOOD GAS BE EQUATED TO ARTERIAL BLOOD GAS?

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Aim Measurement of lactate level is an essential tool in the clinical assessment of patients. Lactate levels greater than 2 mmol/L represent hyperlactataemia whereas lactic acidosis is generally defined as a serum lactate concentration above