Figure 1: Sample posts (thumbnails only) from the "Dial Don't Drive" social media campaign

P029
ESTIMATED PULSE WAVE VELOCITY INDEPENDETLY PREDICTS SURVIVAL-TO-DISCHARGE IN PATIENTS REQUIRING EXTRACORPOREAL MEMBRANE OXYGENATION: A SINGLE-CENTRE RETROSPECTIVE COHORT STUDY

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BACKGROUND: Extracorporeal membrane oxygenation (ECMO) is a life-saving device used to support the respiratory and/or cardiovascular function of acutely ill patients. While this supportive device is widely used in intensive care units around the world, appropriate patient selection is difficult given the high associated morbidity and mortality of those requiring this level of intervention. One possible solution to the heterogeneity of ECMO patients is to determine a variable that reflects a chronic marker of health and has independent strength in predicting overall morbidity and mortality. A suitable candidate for this variable is Arterial Stiffness (AS), a chronic marker of vascular compliance, demonstrated to have strong correlation with cardiovascular disease, peripheral vascular disease, cerebrovascular disease, renal disease, and all-cause mortality. Additionally, AS has been shown to be strongly influenced by systemic inflammation, as seen in ECMO patients. In this study, we aim to understand the benefit of estimated pulse-wave velocity, a metric of AS, as an independent predictor of outcomes and survival-to-discharge in our cohort of ECMO patients.

METHODS AND RESULTS: A retrospective cohort study was performed at the London Health Science Centre (LHSC) in London, Ontario, Canada between 1996-2021, totaling 255 patients requiring ECMO. Estimated pulse wave velocity (ePWV) was calculated using an algorithm generated from the Reference Values for Arterial Stiffness Collaboration. Recorded outcomes included: in-hospital death, ischemic stroke, hemorrhagic stroke, renal failure and need for renal replacement therapy (RRT). For adjusted analysis, survival-to-discharge was used. Multivariate logistic regression and propensity-score matching were utilized to control for confounding. On univariate logistic regression, ePWV was found to have a significant protective effect for renal failure (OR 0.88 [0.78-0.99], p=0.034) and RRT (OR 0.87 [0.77-0.98], p=0.027). Higher ePWV was also found to be significantly predictive of ischemic stroke (OR 1.676 [1.31-2.37], p=0.0002) and in-hospital death (OR 1.20 [1.06-1.38], p=0.006), but insignificant for predicting hemorrhagic stroke (OR 1.07 [0.74-1.55], p=0.710). On multivariate analysis and propensity-score matching, 5 of 6 models demonstrated ePWV as a significant independent predictor of survival-to-discharge. (OR 0.70 [0.57-0.84], p=0.00021, OR 0.72 [0.60-0.86], p=0.0002, OR 0.87 [0.75-1.00], p=0.045, OR 0.85 [0.74-0.97], p=0.013)

CONCLUSION: This study presents ePWV as a promising marker for risk-stratification in ECMO patients. It furthers understanding of the role of arterial health in disease trajectory and strengthens the validity of AS as a marker of interest in medical and surgical management. Further research is needed to validate these findings and develop tangible tools for clinical application.

P030
SAFETY AND FEASIBILITY OF VERY EARLY DISCHARGE IN LOW-RISK PATIENTS WITH STEMI AFTER PRIMARY PCI

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BACKGROUND: Very early discharge (VED) ($\leq$ 36 hours) for low risk ST segment elevation myocardial infarction (STEMI) patients has been reported in small registries but data on real world clinical outcomes with this approach is limited. We prospectively enrolled low-risk STEMI patients into a VED protocol and compared outcomes with similar patients discharged at 36-72 hours.

METHODS AND RESULTS: Between April 2021- March 2022, 479 patients admitted with STEMI underwent primary PCI (PPCI). Low-risk patients were identified using the University of Ottawa Heart Institute criteria, and after providing informed consent were discharged home 20-36 hours after hospital admission. All patients had telephone follow-up by a nurse practitioner (NP) at 2 days, 7 days and 30 days post discharge. The NP assessed symptoms, and provided education and medication titration. The control group consisted of 82 STEMI patients admitted between 2019-2020 who met the low-risk criteria and were discharged between 36-72 hours as per standard practice. Death, major adverse cardiac events (MACE), re-admissions and ER visits within 30 days were collected for both groups. Additional outcomes which included patients' satisfaction and experience of the VED protocol were measured by a survey after 30 days. Among the 479 STEMI patients undergoing PPCI during the study period, 27% (n=131) were identified as low risk. Of these, 61% (n=80) were enrolled in the VED protocol. 39% of the patients were not enrolled because study investigator's