	Canada	United States	p
Select presenting demographics	**(N=67)**	**(N=700)**	
Enrolled in year 2021	78	70	0.183
Female	21	29	0.139
BMI	28 (25, 32)	28 (24, 33)	0.914
Diabetes mellitus	43	40	0.617
History of coronary artery disease	18	25	0.223
History of heart failure	6	14	0.064
Cardiogenic shock pre-PCI	7.5	13	0.191
Cardiac arrest pre-PCI	15	9.3	0.138
In-hospital MI	9	6.3	0.432
Reperfusion strategy	**(N=61)**	**(N=566)**	**0.3**
Medical therapy	13	21	
Primary PCI	75	69	0.039
Facilitated/rescue PCI	3.2	4.2	
CABG	0	1.8	
In-hospital outcomes	**(N=67)**	**(N=700)**	
Mortality	15	29	0.016
Stroke	0	1.6	0.612
Re-infarction	0	15	0.633
Composite of death, stroke and re-infarction	15	31	0.006

Saskatchewan Health Research Foundation

CANCARE Cardiac Critical Care Research Award Winner

P026
ARE BEST PRACTICE GUIDELINES INFORMING WITHDRAWAL OF LIFE SUSTAINING THERAPY FOLLOWED AFTER CARDIAC ARREST?

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BACKGROUND: Out-of-Hospital Cardiac Arrest (OHCA) is a leading cause of mortality worldwide. Amongst patients who achieve return of spontaneous circulation and are admitted to hospital, most will die from the effects of brain injury. Withdrawal of Life Sustaining Treatments (WLST) is the most common means of death, and current guidelines recommend WLST only after formal neuroprognostication, and after 72 hours. We aimed to determine the incidence and characteristics associated with WLST compared with no WLST in comatose patients following OHCA.

METHODS AND RESULTS: Patients admitted to hospital after non-traumatic OHCA between 2012-2019 who subsequently died were studied in a multicentred, retrospective cohort study across three Toronto academic hospitals. Data including baseline demographics, pre-existing medical comorbidities, in-hospital investigations and interventions, medical complications in hospital, goals of care discussions and mode of death were collected. WLST was defined as having documentation that medical interventions were withheld or discontinued (excluding formal declaration of brain death). Of the 130 included patients, 81 received WLST and 49 did not. Demographic and clinical characteristics are outlined in Table 1. Both groups were similar in terms of their pre-existing cardiac and non-cardiac comorbidities, although patients not receiving WLST had greater evidence of multiorgan failure and less often documented goals of care discussions. In those that received WLST, 82% of cases were due to concerns for poor neurologic prognosis with the remainder due to non-neurologic related prognosis or previously expressed wishes regarding interventions. Nearly half of WLST (45%) were < 72 hours from presentation. In patients not receiving WLST, 37% had formal declaration of brain death and the remainder died of medical complications.

CONCLUSION: In this exploratory analysis, many comatose patients receive WLST due to concerns of poor neurologic prognosis without formal declaration of brain death and many of these cases occur < 72 hours. Physicians may over-estimate poor outcomes in this population.

Table 1: Baseline Demographics and Clinical Characteristics in Comatose Patients who Die Following OHCA

Characteristic	WLST (N=81)	No WLST (N=49)
Age	71 (59-81)	63 (54-73)
Male sex (n, %)	65 (80)	32 (65)
EMS Response Time (min)	5 (3)	6 (4)
Witnessed (n, %)		
Unwitnessed	26 (32)	14 (29)
Witnessed	51 (63)	19 (39)
Unknown	4 (5)	16 (33)
Initial Rhythm (n, %)		
VT/VF	13 (16)	8 (16)
PEA/asystole*	60 (74)	23 (47)
Unknown	7 (9)	18 (37)
Time to ROSC (min)	23 (17-30)	35 (24-52)
Initial laboratory values		
Cr	116 (92-150)	107 (91-145)
Lactate*	9.4 (6.2-12.7)	12.1 (10.3-15.2)
pH	6.97 (6.85-7.17)	6.86 (6.80-7.04)
STEMI on presenting ECG (n, %)	16 (20)	2 (4)
Presenting LVEF	45 (32-55)	50 (39-55)
TTM (n,%)*	50 (62)	19 (39)
Coronary Angiogram (n,%)	68 (84)	26 (53)
Culprit Lesion on Angiogram (n,%)	11 (14)	6 (12)
Goals of Care Discussion Documented (n, %)*	67 (83)	6 (12)
Hospital Length of Stay (days)	3 (1-11)	2 (1-6)

Abbreviations: WLST: Withdrawal of Life Supporting Treatment; EMS: Emergency Medical Services; ROSC: Return of Spontaneous Circulation; VT: Ventricular Tachycardia; VF: Ventricular Fibrillation; PEA: Pulseless Electrical Activity; Cr: Creatinine; STEMI: ST Elevation Myocardial Infarction; TTM: Targeted Temperature Management; LVEF: Left Ventricular Ejection Fraction, *$p<0.05$, all characteristics are represented by median (IQR).

P027
COMPARING DUAL ANTIPLATELET THERAPY STRATEGIES POST-ACUTE CORONARY SYNDROME: NETWORK META-ANALYSIS

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BACKGROUND: Various approaches to dual antiplatelet therapy (DAPT) management exist to balance thrombotic and bleeding risks following acute coronary syndrome (ACS). The aim of this study was to compare and rank different DAPT management strategies in patients with ACS with or without percutaneous coronary intervention (PCI).

METHODS AND RESULTS: We conducted a systematic review with network meta-analysis of randomized controlled trials (RCTs) comparing DAPT strategies in patients with ACS. We searched MEDLINE, Embase, and CENTRAL (2007-July 2021) for RCTs that enrolled patients with ACS (or PCI with outcomes reported separately for ACS subgroup) comparing $\geq$2 DAPT strategies, including comparisons between P2Y12 inhibitors, empiric P2Y12 inhibitor de-escalation (switching from prasugrel- or ticagrelor-based DAPT after 1 month to clopidogrel-based DAPT to complete 12 months DAPT duration), pharmacogenomic- or platelet-function testing-guided P2Y12 inhibitor selection, or short-duration DAPT (1-3 months of DAPT followed by P2Y12 inhibitor monotherapy) with intended follow-up $\geq$12 months. The primary outcome was major adverse cardiovascular events (MACE). Secondary outcomes included all-cause death and major bleeding. We performed Bayesian network meta-analyses to compare all interventions simultaneously using the Markov-chain Monte Carlo method, conducted under the assumption of transitivity. We generated odds ratios (ORs) with 95% credible intervals (CrI) from the medians and 2.5th and 97.5th percentiles of the posterior distributions using a hierarchical Bayesian framework, using a random-effects model with informative priors for between-study heterogeneity based on pharmacological interventions with semi-objective outcomes (MACE or bleeding) or death. To rank interventions for each outcome, we calculated the mean surface under the cumulative ranking (SUCRA) curve. From 5941 articles, we included 24 RCTs enrolling 89,620 patients. Both clopidogrel- and ticagrelor-based DAPT increased MACE compared with pharmacogenomics-guided P2Y12 inhibitor selection (odds ratio [OR] 1.37, 95% credible interval [CrI] 1.08-1.74 and 1.35, 1.05-1.79, respectively) and empiric P2Y12 inhibitor de-escalation (OR 1.53, 95% CrI 1.00-2.30 and 1.51, 1.00-2.27, respectively). Compared with short-duration DAPT, standard DAPT duration with all P2Y12 inhibitors (clopidogrel, prasugrel, ticagrelor) and pharmacogenomics-guided P2Y12 inhibitor selection increased major bleeding. Ticagrelor-based DAPT increased major bleeding compared with platelet function testing-guided DAPT (OR 1.60, 95% CrI 1.00-2.55). Empiric P2Y12 inhibitor de-escalation ranked best for MACE (SUCRA 0.89), whereas short-duration DAPT ranked best for death (SUCRA 0.89) and major bleeding (SUCRA 0.93).

CONCLUSION: In patients with ACS, empiric P2Y12 inhibitor de-escalation was most efficacious whereas short-duration DAPT was the safest compared to other DAPT strategies.

Figure. Network meta-analysis results for DAPT strategies compared with clopidogrel.

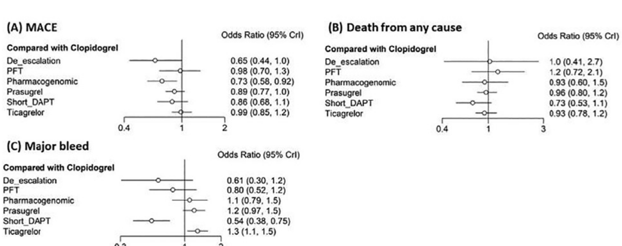

Table. Network meta-analysis results for MACE (left lower half) and major bleeding (right upper half)

Clopidogrel	0.84 (0.68-1.03)	*0.79 (0.65-0.95)*	1.64 (0.86-3.29)	0.91 (0.65-1.27)	1.25 (0.80-1.94)	*1.86 (1.33-2.63)*
1.13 (0.96-1.29)	**Prasugrel**	0.94 (0.74-1.18)	*1.96 (1.03-3.94)*	1.09 (0.74-1.59)	1.49 (0.95-2.33)	*2.22 (1.53-3.24)*
1.01 (0.85-1.17)	0.90 (0.75-1.08)	**Ticagrelor**	*2.09 (1.12-4.10)*	1.16 (0.82-1.66)	*1.60 (1.00-2.55)*	*2.37 (1.76-3.23)*
1.53 (1.00-2.30)	1.36 (0.90-2.03)	*1.51 (1.00-2.27)*	**De-escalation**	0.56 (0.26-1.14)	0.76 (0.34-1.65)	1.13 (0.55-2.27)
1.37 (1.08-1.73)	1.22 (0.93-1.61)	*1.35 (1.05-1.78)*	0.90 (0.56-1.44)	**Pharmacogenomics**	1.37 (0.79-2.37)	*2.04 (1.31-3.22)*
1.02 (0.74-1.43)	0.91 (0.66-1.29)	1.01 (0.72-1.47)	0.67 (0.41-1.14)	0.75 (0.50-1.12)	**Platelet function testing**	1.49 (0.87-2.56)
1.17 (0.91-1.48)	1.04 (0.80-1.35)	1.15 (0.93-1.43)	0.76 (0.49-1.21)	0.85 (0.61-1.17)	1.14 (0.75-1.69)	**Short DAPT**

OR <1 favor the column-defining treatment for MACE and the row-defining treatment for major bleeding.

P028

EARLY SUCCESS AND COST-EFFECTIVENESS OF A SOCIAL MEDIA CAMPAIGN TO REDUCE PRE-HOSPITAL DELAYS IN PATIENTS WITH POSSIBLE ACUTE CORONARY SYNDROME

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BACKGROUND: Despite many improvements in percutaneous coronary intervention (PCI) and hospital systems of care, prehospital delay remains a significant barrier to timely reperfusion in acute coronary syndromes (ACS). Prolonged delays to reperfusion results in poor patient outcomes. There is data to support the efficacy of educational interventions to reduce patient-related prehospital delay in the setting of possible ACS, especially in chest pain patients. Traditional media such as television and radio are highly dependent on a ratings system: that is, how many people in an audience can be reached. Given the recent decline of television viewership and radio audiences, these are less reliable forms of message transmission. In addition, cost remains high, further lowering cost-effectiveness when funding a campaign. Hence, we have launched a novel low-cost social media-based education campaign targeting patients with chest pain to reduce pre-hospital delays.

METHODS AND RESULTS: The primary message of our campaign is three-pronged: to have patients recognize the most common signs of a heart attack (chest pain, shortness of breath, diaphoresis), to call 911 to seek medical care quickly, and not to drive themselves to the hospital. Our motto is: "Dial, Don't Drive". In the first 8 weeks of our campaign, we created 17 posts on Facebook and Instagram. We focused on "Team Heart Attack" – introducing the team of healthcare professionals who care for ACS patients; "Patient Voices" – telling patient stories; and "ACS Education" – sharing common and uncommon symptoms of ACS, common medications and the importance of seeking medical attention in a timely fashion (see Figure for examples). We have reached a 62,700 people through Facebook, and a further 19,100 via Instagram. We had 102,748 and 33,059 content displays on Facebook and Instagram, respectively. Currently, we have 206 followers on Facebook and 155 on Instagram. The total cost of this campaign was $903.71 ($737.99 for software and $165.72 for advertisement). As a comparison, tradition media for a billboard in our community is $12,150.00 for 1 month, a weekend newspaper ad is $5880.00 and interior bus post is $8886.08 for 2 months.

CONCLUSION: In the first 8 weeks of the novel social media-based education campaign, there is evidence of our content reaching our target audience and producing engagement with our community. Cost-effectiveness appears to be promising at this early time point. The next phase of the campaign will be targeting patients at high-risk of ACS and those who are at risk of delayed presentation.