Cardiac arrests in general practice clinics or witnessed by emergency medical services: a 20-year retrospective study.

Authors: Brian Haskins[1,2,3*], Ziad Nehme[3,4], Peter Cameron[1,2,5], Karen Smith[1,2,3,4].

1. NHMRC Centre of Research Excellence in Pre-hospital Emergency Care Australia and NZ (PEC-ANZ). 2. Department of Epidemiology and Preventive Medicine, Monash University. 3. Department of Paramedicine, Monash University. 4. Centre for Research and Evaluation, Ambulance Victoria. 5. The Alfred Hospital.

Introduction

- To examine differences in the frequency and outcomes of out-of-hospital cardiac arrests (OHCA) occurring in General Practitioner (GP) clinics compared to those witnessed by emergency medical services (EMS) personnel.

Methods

- A 20-year retrospective study using Victorian Ambulance Cardiac Arrest Registry data. OHCA:GP (216), EMS (6147).

Results

- Patients attended their GP clinic despite having prodromal signs and symptoms of myocardial infraction. (Fig. 1)
- For OHCA occurring in GP clinics, GP-initiated defibrillation and survival rates increased between 2000 to 2019. (Fig. 2)
- After adjustment, both EMS witnessed OHCA and GP cases shocked using an onsite automated external defibrillator (AED) were significantly more likely to survive compared to OHCA in GP clinics without an onsite AED. (Fig. 3)

Discussion

- Patients should access EMS for cardiac warning symptoms.
- GP clinics should be prepared to manage OHCA, including the provision of CPR and the rapid application of an AED.

EMS witnessed OHCA were three times more likely to survive than OHCA occurring in GP clinics without an AED.

Survival more than doubled when GP patients were defibrillated using an onsite AED.

Patients having cardiac symptoms should call EMS immediately and all GP clinics must be prepared to manage OHCA, including immediate CPR and access to an AED.

MONASH University

PEC-ANZ

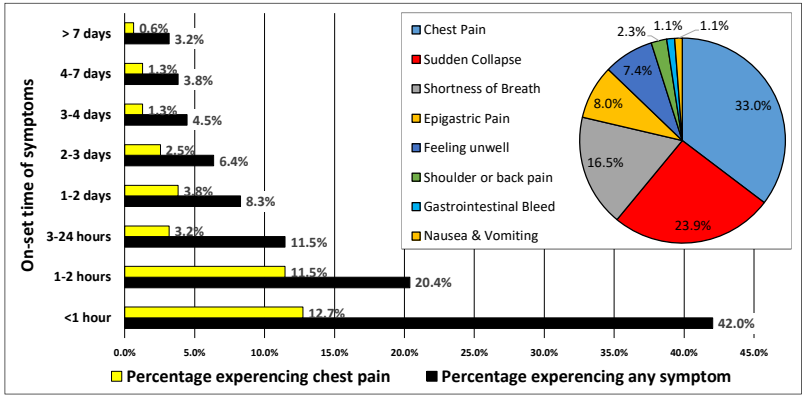

Fig 1: Prodromal symptoms of OHCA patients attending their GP

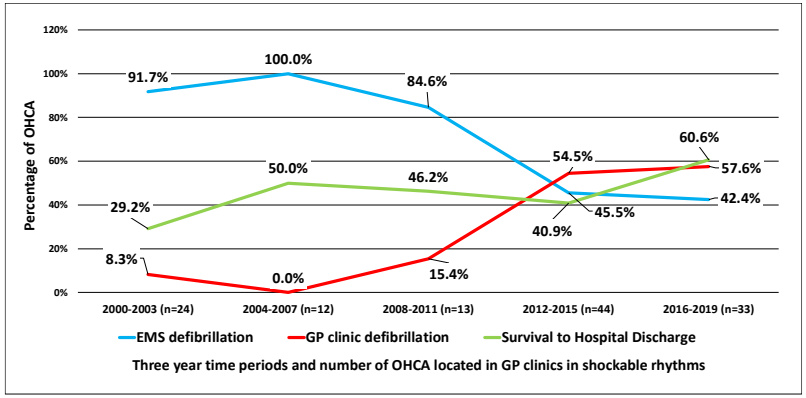

Fig 2: Three year time periods for GP OHCA in a shockable rhythm

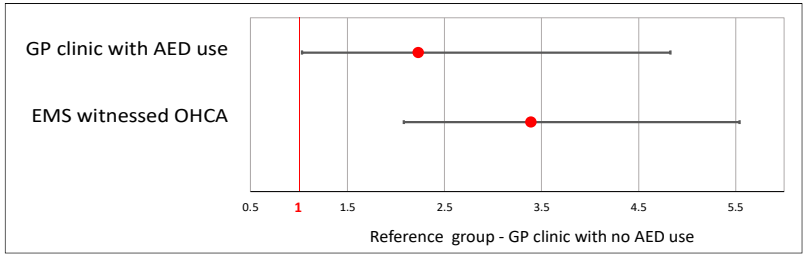

Fig 3: Adjusted odds ratios for GP AED use and EMS witnessed OHCA

Contact details: Brian Haskins, PhD Scholar (PEC-ANZ),
Email address: Brian.Haskins@Monash.edu Twitter: @BrianHaskins5

School of Public Health and Preventive Medicine