



(AP088) Are medical dispatch systems delaying Telephone CPR?

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Introduction

The current ambulance medical dispatch priority system (MPDS) requires 21 questions before telephone CPR (t-CPR) can be offered. We investigated if these questions were delaying 'Early CPR'.

Methods

To listen to each of the control centre recordings of cardiac arrests identified by the Out of Hospital Cardiac Arrest Register (OHCAR). 202 OHCA were registered and managed by the Ambulance Service in a two year period in the Midland Area Ireland (2011-2012), an incidence rate which is similar to that reported nationally.

Objectives

The aim of this study was to:

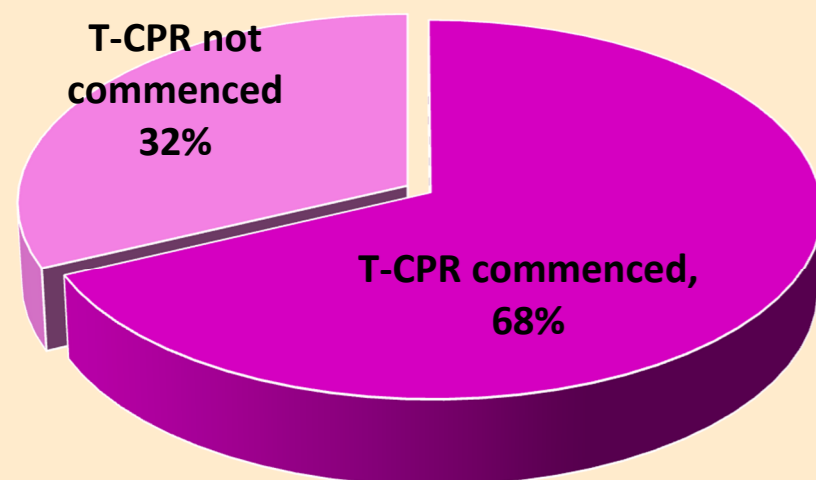
1. Identify the proportion of events in which telephone CPR is commenced.
2. To identify the time it takes to initiate the 1st compression using t-CPR.

Limitations

While the number of cases is small they are consistent with national cardiac arrest rates of approximately 39 per 100,000 persons¹.

Result 1 – number of event t-CPR was started

T-CPR instructions were given in 68% of cases (N=47/69) where the ambulance controller had an opportunity to assess the patient.

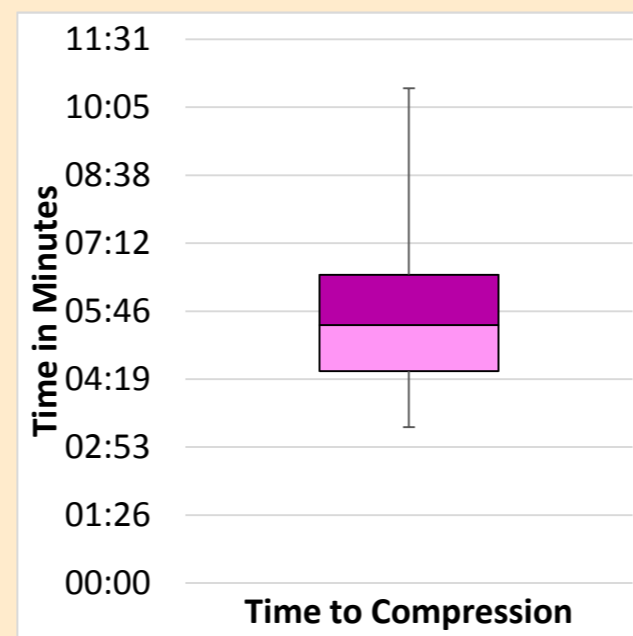


OHCAR cases	202	
Missing data	-25	
Not in arrest at time of call to EMS	-32	
Not beside patient	-63	
CPR in progress already	-13	
Cases with option for T-CPR		69
T-CPR not delivered		-22
T-CPR delivered		47

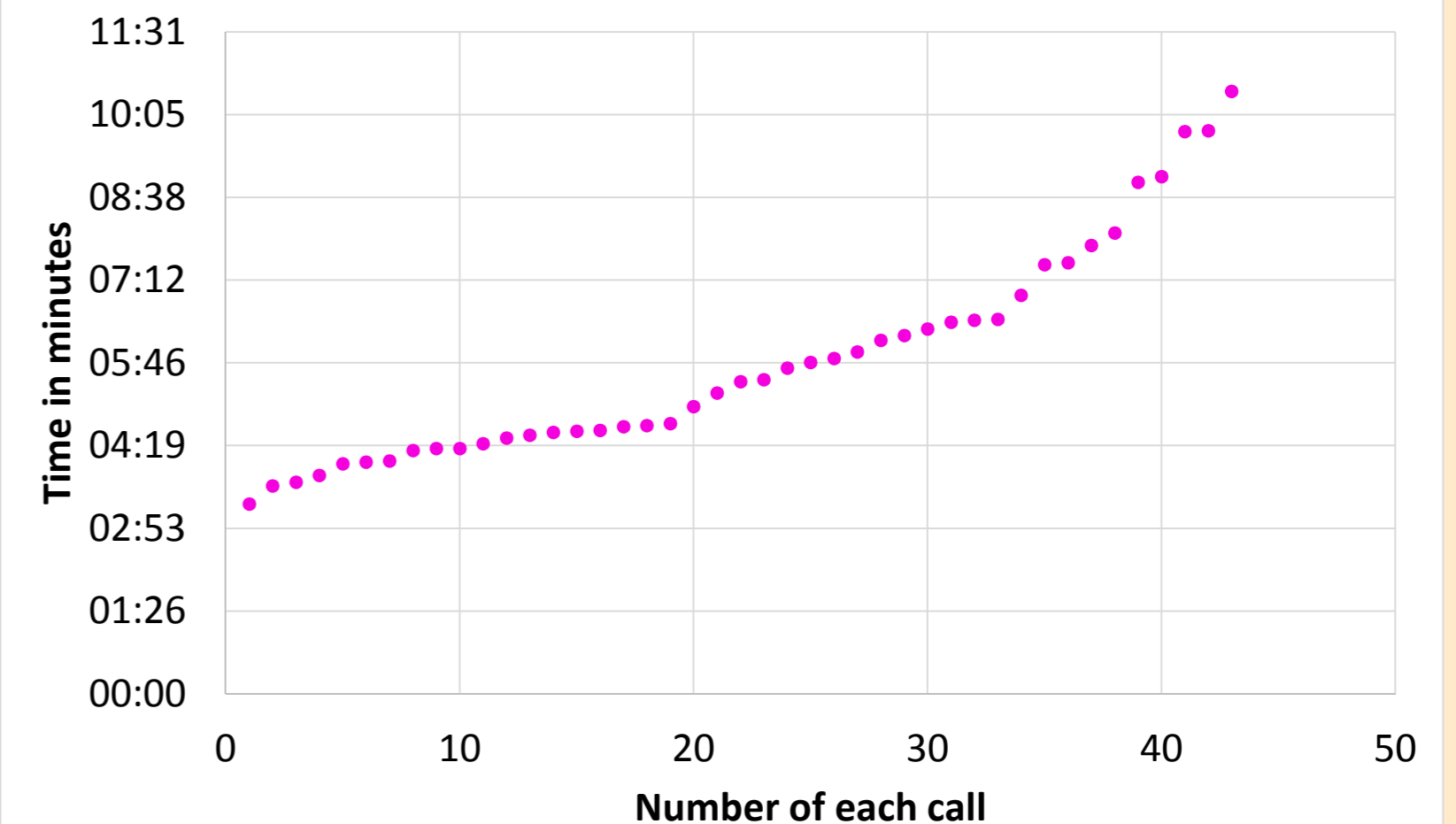
Result 2 – Time to t-CPR

There were 43 cases available for analysis of time from receipt of call to first compression. The median time for telephone CPR to be delivered by the caller to the patient was 5 min 28 sec (N=43 cases). T-CPR was commenced in 47 cases, 2 cases were excluded as they were paediatric cases (CPR protocols differ) and in two other cases the time of 1st compression could not be reliably documented.

Data	Time (min)
Median	05:28
Min	03:18
Max	10:29
Quartile 1	04:23
Quartile 3	06:32



Time to T-CPR (Scatter Chart)



Conclusion

5 minutes 28 seconds is a long interval for the delivery of the 1st compression however it is comparable to other studies².

Time taken to complete the 21 standard questions is dependent on many factors. A system that requires 21 questions is difficult to justify and does so at the expense of initiating CPR.

Amendments to the AMPDS sequence are essential, as commencing chest compressions as soon as possible is essential.

It appears that in 70% of cases the controller had good reason to suspect the patient was in cardiac arrest, however continued with the questioning before beginning t-CPR.

Recommendations

Once the location of the patient has been identified, a two question system is suggested; Is the patient conscious and is the patient breathing normally? If the reply is negative then chest compressions should commence without reference to the airway. Controllers should be encouraged to move to t-CPR protocols as soon as they suspect the patient is in cardiac arrest.

References

- 1 OHCAR, 5th Annual Report 2013 National Out-of-Hospital Cardiac Arrest Register, (2013)
- 2 Resuscitation, A standardized template for measuring and reporting telephone pre-arrival cardiopulmonary resuscitation instructions _ C. Dameffa, et al 85 (2014) 869–873