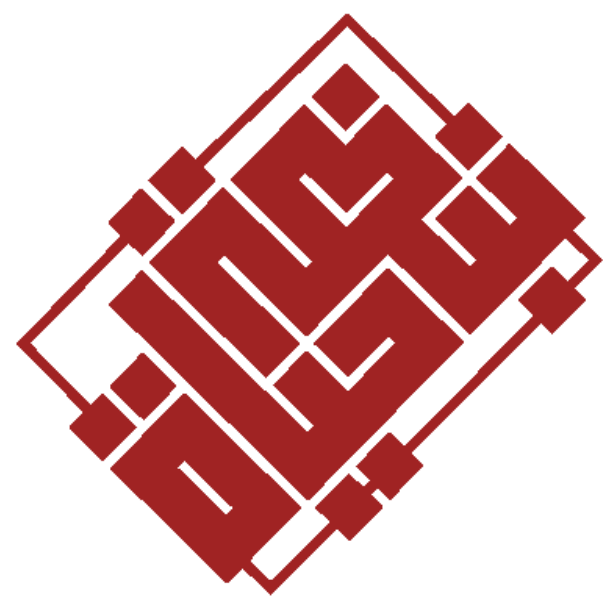




فريق نبضة حياة التطوعي
LIFE PULSE TEAM

From Worst to Best: Two Community First Responder-Managed Out-of-Hospital Cardiac Arrests in Bahrain Illustrating Both Extremes of the Chain of Survival

4th Arab Resuscitation Council
Scientific Conference
Dubai, 15–17 October 2026
Abstract AS-ArRC-2026-00092
Case Series · Pre-hospital Care

Mohamed Alsharqi^{1,2}, Yusuf Alkhayyat^{1,3}, Safiya Hamada^{1,4}

¹Life Pulse Volunteer Team, Kingdom of Bahrain ²Bahrain Specialist Hospital ³Badr Al Safa Medical Center ⁴Enaya Physiotherapy Center

INTRODUCTION

Out-of-hospital cardiac arrest (OHCA) is a leading cause of preventable mortality worldwide. The first national OHCA cohort study in Bahrain (2024) reported low bystander intervention, no documented bystander AED use, and 30-day survival of 1.2% (table below).¹

Life Pulse is a community volunteer first response team in Bahrain that deploys trained responders equipped with portable automated external defibrillators (AEDs) to address this gap.

OBJECTIVE

To present two documented OHCA managed by Life Pulse community first responders, representing the two extremes of the survival spectrum, and to illustrate the relative contribution of patient-related versus response-related factors to outcome.

METHODS

- Design: case series.
- Setting: community locations in Bahrain, July 2024.
- Patients: two adult males, aged 36 and 37 years.
- Data sources: responder documentation and AED feedback device records (chest compression fraction, depth and rate).
- Consent obtained from the surviving patient and from the family of the deceased for anonymised presentation.

NATIONAL CONTEXT

Bahrain national OHCA cohort, 2024 ¹	Value
Annual incidence (per 100,000)	21
Bystander CPR rate	36.8%
Documented bystander AED use	None
30-day survival	1.2%
Good neurological outcome	0

RESULTS

Table 1. Presentation, management and outcome of the two cases

Variable	Case 1	Case 2
Age / sex	37-year-old male	36-year-old male
Location	Daih (residential area)	Rifa'a (residential area)
Witnessed collapse	No. Found with agonal breathing and absent pulse; estimated downtime about 10 minutes	Yes. Arrested during assessment for chest pain and dyspnoea
Initial rhythm	Asystole, later converting to pulseless ventricular fibrillation	Ventricular fibrillation
Time to AED application	Within 1 minute of responder contact	Within 1 minute of responder contact
Shocks delivered	3	1
CPR	Guideline-quality CPR. Feedback device: chest compression fraction 91.22%, depth compliance 91%, rate compliance 88%	Compression-only CPR, started immediately
Time to ROSC	No ROSC on scene	Under 5 minutes from start of CPR, after a single shock
EMS arrival	17–19 minutes after responder contact; care bridged by lay responders	Patient handed over to EMS with return of spontaneous circulation
Outcome	Pronounced dead in hospital	ROSC, breathing and conscious before transfer. Intensive care, coronary catheterisation, discharged from hospital

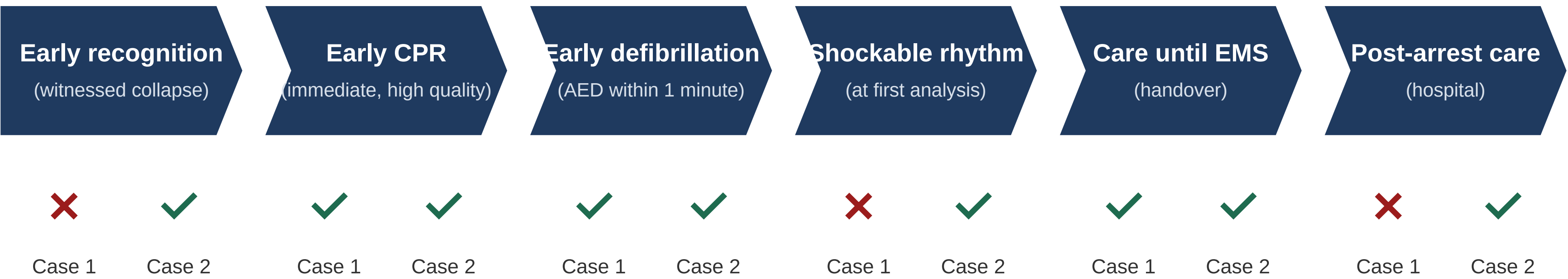


Figure 1. Chain of survival in the two cases. Links in the responders' control were intact in both cases. The links that differed, witnessed collapse and shockable initial rhythm, were patient-related.

DISCUSSION

Both patients received the same response: trained volunteers, a defibrillator within one minute, and immediate CPR. The Case 1 feedback record (compression fraction above 90%) shows that resuscitation quality was not the limiting factor. Case 2 completed every link of the chain, from witnessed collapse to hospital discharge after coronary catheterisation, in a country with 1.2% survival and no documented bystander AED use.¹

LIMITATIONS

- Two cases selected to represent the extremes; no causal inference is possible.
- Collapse-to-responder-contact interval in Case 1 is an estimate (unwitnessed).
- Feedback device CPR metrics available for Case 1 only.
- Neurological outcome at discharge was not formally scored (CPC).

CONCLUSION

The contrasting outcomes are consistent with patient-related factors, witnessed status and initial rhythm, rather than the quality of the resuscitation, as the main determinants. Organised community first responder programs can deliver guideline-quality bystander CPR and defibrillation. Scaling such programs, together with public access defibrillation, merits priority in the Arab region.

REFERENCE

1. Abuzeyad FH, Chomayil Y, Farooq M, et al. Out-of-hospital cardiac arrest in Bahrain: national retrospective cohort study. Resusc Plus. 2024;20:100778. doi:10.1016/j.resplu.2024.100778

ETHICS AND ACKNOWLEDGEMENTS

Consent for anonymised presentation obtained from the surviving patient and the family of the deceased. We thank the Life Pulse responders involved. No funding; no conflict of interest.



Contact: Mohamed Alsharqi
alsharqi@lifepulse.bh
lifepulse.bh