



# Prehospital double sequential defibrillation of refractory ventricular fibrillation associated with improved outcomes

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## Objective

To track the outcomes after double sequential defibrillation (DSD) for refractory ventricular fibrillation (v-fib) in the field.

## Methods

Our county EMS system is one of the largest in our state and encompasses more than This analysis is a subset of our county EMS prehospital IRB approved research registry that tracks all adult cardiac arrests. This dataset encompasses all patients in a 24-month period who underwent double sequential defibrillation after refractory ventricular fibrillation (v-fib). Refractory v-fib was defined as v-fib that did not convert after 3 full shocks.

## Results

A total of 31 cases met the criteria for refractory v-fib. The additional set of pads were placed in the antero-postero direction. The energy applied was 200J, and the Shock-to-Shock Cycle Time was less than 20 seconds. Seven patients achieved return of spontaneous circulation (ROSC) and six patients made it to hospital discharge (fig 1).

## Discussion & Conclusion

Double sequential defibrillation is a viable option for patients in refractory v-fib. in patients who would be otherwise dead. Our data demonstrates that DSD is feasible in the field and is associated with ROSC in ¼ of cases, and with survival to hospital discharge in 1 out of every 5 cases.

## References

year	# patients	ROSC	% ROSC	Survival to Discharge	% Survival to Discharge of ROSC	Overall Survival to Discharge
1	15	3	20%	2	66%	13.3%
2	14	4	28.5%	4	100%	28.6%