A simulation model to enable the optimization of ambulance fleet allocation and base station location for increased patient survival

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Highlights

- We simulate and optimize within a multi-tiered Emergency Medical Service model.
- We apply the model using real call data from the London Ambulance Service.
- Increases in cardiac arrest patient survival are seen without additional resources.
- An optimized new base station location and resourcing improves patient survival.
- Optimizing the removal of a base station has low impact on survival probability.